10259

The Manufacturing and Construction Journal of the Textile Industry

COTTON

Entered as second-class matter at the postoffice, Dalton, Ga., under Act of March 3, 1879.

Volume 91.
Number 8.
$1.00 a Year.

JUNE, 1927

Published monthly by
W. R. C. Smith Publishing Co.
Dalton and Atlanta, Ga.

LIBRARY PEABODY INSTITUTE

A nap that a lazy man might envy

Belting hides being inanimate objects, we have no idea how they feel about the nap they take, blanketed with layers of tanbark, during the tanyard process; but we do know what a difference it makes in the life of a Graton & Knight transmission belt.

This nap is the second of the two major tanning steps. The hides are taken from the vats in which the tanning process starts and are laid flat in other vats containing stronger solutions of tanning liquor. A layer of ground tan bark is therefore spread over every hide. At regular intervals the hides are moved into solutions of increasing strength until the tanning is finished.

As you watch the workmen shovel the tanbark on and place the hides in the tanning liquor, it looks like a casual, simple operation.

But the strength of the liquor, the character of the tanbark, the substance of the hide and the change that gradually takes place, are being watched carefully to be sure that everything is in accord with the Graton & Knight tanning formula.

That is one of the reasons why Graton & Knight belts last longer.

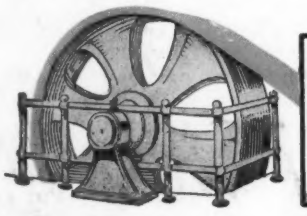
GRATON & KNIGHT COMPANY

WORCESTER, MASSACHUSETTS
Branch Offices throughout the World

GRATON & KNIGHT
Standardized
LEATHER BELTING LASTS LONGER

The "STANDARDIZED BELTING MANUAL"

contains 170 pages of useful information about belting, how to use it, take care of it, and make it deliver the most for your money. Send for a copy.



GRATON & KNIGHT COMPANY, Worcester, Mass.
Send me a copy of "Standard Belting Manual."
Name .....
Company .....
Place .....
Prices, quality for quality, 5 to 10% lower than the field. 101-9

GRATON & KNIGHT

Table of Contents, Page 49 Buyers' Index, Page 186 Advertisers' Index, Page 198

"Yes we have no trademarking problem"

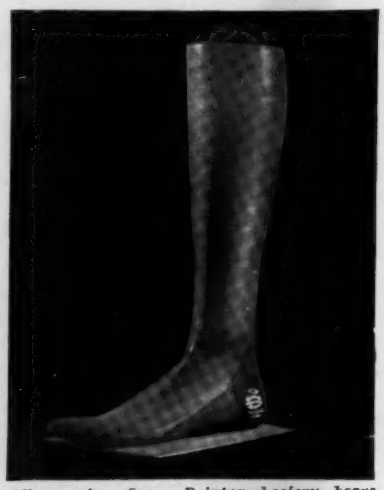
An interview with the Gotham Silk Hosiery Co.

Is the trade-marking of hosiery a mere detail, too unimportant to bother about? Will any kind of trademark application do? Is one method better than another?

Your interviewer put these questions to the Gotham Silk Hosiery Co. They were pretty positive in their reply. "In this company," it was pointed out, "the matter of trademarking is considered of great importance—in spite of the fact that the gold stripe on Gotham hosiery is in itself a trademark of the product.

"In the first place, if the quality of the trademark is not equal in appearance to the quality of the hosiery, the appearance of the product suffers. In the second place, if the trademark is not easy to apply and readily removed, if desired, you can sustain appreciable losses in the way of seconds. In the third place, as many as 25,000,000 trademark transfers are ordered at one time. So that from a point of view of mere volume, the matter is important. And finally, if the service of the company supplying the transfers falls down, our own delivery system could be entirely upset with resultant complaints of delayed orders from Gotham customers.

All genuine Gotham Hosiery bears this Gotham trademark applied in gold with Kaumagraph Dry Transfers.



All genuine Onyx Pointex hosiery bears this Pointex trademark in gold on the dark shades—in blue on the light shades—all applied with Kaumagraph Dry Transfers.

WHY SERVICE IS SO IMPORTANT

"With Gotham, this matter of service is particularly important due to the peculiar kind of service we render our distributors. This condition makes it necessary for us to receive promptly, weekly shipments of transfers for trademarking our hosiery. If these shipments failed us, even in a single instance, our delivery promises would be seriously threatened.

"When the Gotham Silk Hosiery Company was organized many years ago, we adopted the Kaumagraph Dry Transfer method of marking. It was easy to apply, economical to use, beautiful in appearance, dry in application—avoiding the danger of water spotting hose. And from the very start the service we have received has been very satisfactory. Our mills receive weekly shipments of transfers and never once has Kaumagraph fallen down in its delivery."

WILL HELP YOU DESIGN A TRADEMARK

The Kaumagraph Transfer method is the only practical method of applying trademarks to hosiery, silks, cotton goods, woolens, and other textile fabrics. With Kaumagraphs you can stamp your trademark on the fabric in any color—with a beautiful mark that won't smudge or discolor. Kaumagraphs can be applied by machine along the selvage; by hand in a second as an end stamp; or on the toe of hosiery.

Kaumagraph's Service Department offers you a helpful, untiring assistance in designing or applying a trademark. Kaumagraph's Lithographic Department offers unequaled service in quality and prompt deliveries, on such lithographic requirements as board-end labels and hosiery packing.

This Twin Service is without parallel—only Kaumagraph offers it. We urge you to send the coupon below today for samples of our Lithographic work and of Kaumagraph Transfers, to learn how Kaumagraph's Twin Service can serve you.

KAUMAGRAPH COMPANY

350-356 West 31st St., New York

Boston Chicago Philadelphia
Charlotte Paris, Ont. Paris, France

KAUMAGRAPH CO.
350-356 W. 31st St., N. Y. City

Please send us samples of Kaumagraph's Twin Service, together with full information.

Name .....

Address .....

.....

C-6-27

COTTON

Published Monthly by

W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga.

L. L. ARNOLD, Editor. R. W. PHILIP, Associate Editor.

Editorial and Advertising Department, Grant Bldg., Atlanta, Ga. Subscription price, $1.00 per year; Canada, $1.50 a year; Foreign, $2.00 a year. Entered at the Dalton, Ga., postoffice as second-class matter.

Contributions to the columns of Cotton are solicited and paid for after publication. The names of contributors need not necessarily be used, but must accompany all manuscripts.

Orders for any change in advertising must reach Atlanta previous to the tenth of the month preceding month of issue, otherwise publishers cannot be responsible for changes.

When changing address notify us, not the postmaster. Always give the old address as well as the new one.

Volume 91 Member Associated Business Papers, Inc. Member Audit Bureau of Circulation. No. 8

CONTENTS

Among COTTON's Readers 47
With the Publishers 51

GENERAL AND TECHNICAL—

Twenty and Ten, A Character Sketch Depicting Industry 757
Cotton Manufacturers of North and South Hold Joint Meeting at Atlantic City 759
American Association's First Session 759
Mr. Emery's Address on Taxation 761
Morning Session of National Association 763
What Price Style Shows? 763
The Friday Afternoon Joint Session 764
Mr. Hines' Address 766
Weaving Division Meets at Spartanburg 771
Eastern North Carolina Division, Southern Textile Association, Rosemary, N. C. 773
Setting of Feed Rolls, Blows Per Inch, Feed Plate Settings 773
Card Drafts, Card Production, Variation in Sliver 774
Humidity in Picker Room, Five Ends Up at Drawing, Spraying Oil on Cotton 775
Fan Speed in Pickers, Long Break Drafts in Spinning, Using Cleaning Hands on Spinning 776
An Ideal Spinning Room 777
Causes of Uneven Yarn, Spinning Room Humidities, Weak Places in Yarn 778
Re-Working Card Strips, Laps on Middle Steel Roll 779
Social, Religious and Educational Conditions in Textile Mill Villages 780
Georgia Mill Men Meet at Georgia Tech 783
The Effect of Increased Air Movement in a Humid Weave Shed 787

CURRENT TOPICS—

The Factory Does Its Part and More 789
Too Many "Special Weeks" 789
The Turmoil in China 789
Money Lending on the Grand Scale 790
Ocean Freight Rates 790
What the Southern Mills are Doing 790
New England Mill Situation 792
Cotton Comment 796
Notes About Men You Know or Know About..... 800
An Old-Timer Says— 803

HOW OTHER MEN MANAGE—

Finishing Plant Questions 805
A Correction 805
Adding to the Value of Cotton 805
Adjusting Picker Evener Motions 813
A Cold Paste for Scavenger Rolls 813
Trouble in Sizing Ball Warps 815
Desires Quill Breakage Figures 815
Textile Schools and Cloth Finishing 815
What Makes Warp Streaks in Plain Fabrics?..... 818
Answers Question on Designing 818
A Yarn Mill Layout 821
A Twister Problem 823
Average Percentage of Seconds or Shorts on Osnaburgs 823
Humidification in the Picker Room 825
Selecting Combs for the Slasher 825
Cost of Roller Covering 831
Using Steel Harness on Heavy Work 831
Cockled Yarn 832
Southern Textile Association Program 832

KNITTING SECTION—

The A B C of Dyeing 835
Multi-Colored Effects on Multi-Fibered Hosiery... 837
Figuring Costs on Full-Fashioned Work 841
Back-Winding Yarn 841
A Looper Difficulty 843
The Best Way to Handle Press-offs in Full-Fashioned Knitting 843
Dyeing Two-Fiber Hose 845
How May These Oil Spots Be Prevented? 846
Experimental Departments 846
Keeping a Record of Machine Overhauling 849
A Convenient Sinker Ring Clamp 849
A Production Problem 851
Among the Knitting Mills 852
New Hosiery Combinations 853
The Yarn Market 856
The Knit Goods Market 859
Dressy Novelties for Ladies' Wear 866

ARCY—

A Means of Getting The Most Value From a Dollar's Worth of Starch

ARCY is a product used in warp sizing and cloth finishing for converting ordinary thick boiling pearl starch into a soluble form, the solutions of which are transparent and remain fluid at lower temperatures.

Trademark Reg. U. S. Patent Office

Ordinary thick boiling pearl starch possesses valuable adhesive properties. When liquefied with ARCY, all this natural adhesiveness is conserved, and each separate little granule of starch is completely liquefied. The resulting starch solution penetrates and binds the fibres. Hence the noted reduction in weave room floor sweeps.

ARCY being a stable and accurately standardized product, gives absolutely concordant results. Its application is simple, inexpensive, and practically fool-proof.

Manufactured by

American Rapidase Company, Inc.

DISTRIBUTED THROUGH

DRAKE CORPORATION

NORFOLK : : VIRGINIA

TWENTY and TEN
A Character Sketch Depicting Industry

There is an adage which says that the man who finds greatest happiness is he who does the work in life which he enjoys and for which he is best fitted. Tragedies are laid around the round peg, square hole complex; while science, literature, art, industry, are upbuilded by men who fit into their proper place and find in their work the secret of happiness.

Some men never reach this goal; others find their life-work at the start; still others attain it after an extended search. But this story begins with the unusual situation of a man being literally torpedoed into his life's activity; who, being thus summarily placed in the proper sphere, now realizes to the utmost upon every possible angle of the suggested maxim.

On a sultry Fourth of July, 1897, the U. S. S. Santee was the temporary quarters of a cadet corps from Annapolis, who had found naval discipline extremely trying in its restraint upon the established customs of youth in holiday celebration. Someone thought the exercises of the day had not been sufficiently demonstrative, and suggested that a tropedo be fired to celebrate the auspicious occasion in a fittingly forceful manner. A lithe and slender cadet hailing from Cedartown, Georgia, was the one directly responsible for the fireworks. Naval discipline is an inviolable code, and the result of the incident was that the Navy lost the makings of an Admiral—and the textile industry gained a leader.

Events in the life of George Simmons Harris up to this point constitute the growing up of a normal southern boy, but developments from that time until this year, when he has just been made president of the American Cotton Manufacturers Association, provide the theme of this effort to delineate the character and describe the career of the man who thus receives the greatest single honor possible at the hands of his fellow cotton mill executives.

First, the account of his activities. Upon returning from Annapolis to Cedartown, where he was born on January 16th, 1881, George, at the age of 16, entered the Georgia School of Technology where he was a student during the next two school years. In the spring of 1899 he began his textile career on the unimpressive job of feeding hoppers in a Cedartown mill. Late in 1900 he was made master mechanic at the Aragon (Ga.) mills and in January, 1901, he entered the Lowell Textile School, at Lowell, and was graduated on June 5th, 1922, having completed the three-year course in one and one-half years.

Young Harris, now just having attained his majority, resumed the study of "cotton milling" at Cedartown, and after four months, was made superintendent of the Sycamore Yarn Mills, at Sycamore, Ala. He filled this position for three years, and in 1905 Samuel A. Carter, took Harris from Sycamore to become superintendent of the Gate City Cotton Mills, at College Park, Ga. In 1907 a larger opportunity as superintendent of the Lanett Cotton Mills, at Lanett, Ala., now the Lanett Mill Division of the West Point Mfg. Co., came, and it was in this position that Harris established himself as one of the outstanding young manufacturers of the South. During the time from 1916 to May 1920, when he left Lanett, he acted also in the capacity of agent of the Lanett Bleachery & Dye Works, at Lanett. In May, 1920 the Exposition Cotton Mills of Atlanta, Ga., selected Harris as president and manager, and he occupies that position today.

Considering now the man, Harris has one outstanding characteristic. That is his innate love of and ability for constant, persistent work. It is his shibboleth, and characterizes the man. He is dissatisfied with any uncompleted job. As a companion attribute, Harris has one of the really analytical minds in the industry today. He is not content with anything short of a complete comprehension of any matter in hand; he is primarily a student, and has a power of application which so augments that dogged inclination toward genuine work that when he has finished an investigation, it is certain he is familiar with every angle of the subject. Harris' progress from the superintendency of a small yarn mill to his present position has been achieved largely because of these two characteristics. His career has been unusual, even in the industry, beause he was "graduated" from the manufacturing end into the financial executive group.

Up until he left Lanett, he had been concerned almost entirely with production. When he went to Exposition he was confronted with a doubly difficult job. As a merchant he was a novice; it was necessary for him, in concentrating upon the newer activity, to forego intimately the mechanical details of the mill—though he has never given up his interest in these things. He is still a keen follower of developments of a practical nature. But in his new position, he found new contacts, a broader field. He went slowly at first—that analytical mind was acquiring a knowledge of the selling of cotton goods and the general direction of a mill from the executive standpoint. He is now recognized as one of the very few capable "combination-men" in the industry—that is, possessing a thorough understand-

ing of both the manufacturing and merchandising ends of the mill.

As a directing executive, through his own natural inclination toward work, Harris sets an example which those under his direction follow. He is in no sense a driver, except of himself, but leads those associated with him into activity by his own precept. He is perhaps unconscious of the influence he exerts in this direction, because he undoubtedly does not think of his job in terms of how hard he works. He works because he loves to do it, and because it gives expression to a nature which is constantly demanding activity.

To one phase of his managerial duties particularly Harris is giving an interested cognizance, and that is an effort to prevent from arising in the minds of his men what he terms a "president-complex". That is, he wants his men to think of their jobs and their work, instead of the boss; when they leave their work he wants them to forget about him as a superior officer. Harris' career has brought him up all along the line, and he appreciates just the conditions in every position. He believes that executive most successful who prevents this "president-complex", and that man happiest and most efficient who works without its influence upon his mind.

It was natural for a man like Harris to be drawn into the executive ranks from the manufacturing end, and it followed as well that with experience as an executive, broader fields for his unceasing activity would demand him. He found interest and opportunity in trade association work, into which he fitted with the naturalness of one born to the task. He soon learned that lack of genuine cooperation between the mills was a forcibly evident ailment.

In 1924 Harris was made president of the Cotton Manufacturers Association of Georgia, holding this office for three successive years. This contact gave him a means of carrying out his doctrine of cooperation; as well as an opportunity for concrete service to the industry. Although the Association job could have been considered just a side issue—a conferred honor as it were—Harris took it just as seriously as he did his main occupation and worked at it just as hard as if it had been his chief activity.

Just as in his executive work, Harris was aided by his back-ground of practical experience, so, in his entrance into executive association activity, he brought into it a fresh viewpoint, unhampered by precedent—together with that persistent intuitive desire to analyze things, take them apart and get down to the basis of everything. Added to this was his unusual clarity of vision and foresight. The result was, that with the able assistance of W. M. McLaurine as secretary and co-worker, Harris really made trade association history from the standpoint of rendering definite service, insofar as the scope of the organization extended.

When he became an executive, Harris was quick to sense the need for coordinated action of some sort among manufacturers, with a constructive cooperative spirit as the basis, as a remedy for some of the industry's ailments. Therefore, when Lee Rodman conceived the idea of a Cotton-Textile Institute, Harris aided in developing that idea resulting in the Institute of today, laying no claim, however, to originating it. The rapidity with which the Institute movement gained ground, and its effective organization, can be attributed in no small part to the unselfish, devoted work of this unassuming man who believes in its possibilities and who contributed much to it.

Most men, when they apply themselves to work as vigorously as Harris does, seek recreation in some form of sport as mental diversion. But outside of week-end golf—which he pursues as carefully and painstakingly as he does his work—he finds no occasion for diversion in the accepted channels. He contends that his association activity furnishes him a change of thought and diverts his mind from his occupation. To what he will turn when he completes his service in this direction as president of the American Association is beyond this chronicler to predict. Perhaps then he will find a hobby outside of the cotton manufacturing field. But it is a certainty that during his administration as president of the Association, he will be president in fact. It is not his nature to accept an honor or a responsibility without giving to the task his very best efforts, which means a surprising amount of honest work and application.

Thus his work. Thus the truth of the statement that the Navy lost the makings of an Admiral, which was probably taken in jest. For if George Harris had acquired for naval activity the same interest and attachment he has given the cotton mill, his progress there would have been as certain as it was to come in his chosen field. He is that kind.

When Harris leaves his office, he has but one thought, and that is for his home and his family. Someone has said that George Harris has but two loves—his family and his mill; and thus is his life rounded out. Just as his intense nature concentrates his activities, his diversion even, upon the mill, so does he devote the other side of his nature to his family. On May 10th, 1904, when he was superintendent at Sycamore, he was married to a New England girl, Miss Minnie Agnes Teague, and she has been a complement to his life from that time. They have two children, Gertrude and Margaret, and in this family circle George Harris finds his greatest happiness and pleasure. It *is* his happiness, and truly holds the supreme place in his life.

In personal characteristics, Harris is more of the calm, quiet, unassuming type rather than forceful and magnetic. He leads rather through example and confidence engendered by an evident earnest sincerity and honesty. There is none of the "mixer" in his make-up, and perhaps his reserved, formal demeaner often-times belies the cordial, affectionate disposition of the man. His penchant for serious work has forced a neglect of the social aspects of his nature. Yet there was never a more congenial companion after acquaintance. His reserve and serious turn of mind cause his friendships to be made slowly and carefully—just as in all of his other actions. In fact, outside of his family, he has no personal intimates. But withal there is none more popular than he among his associates, who appreciate his ability and his earnestness.

Harris for three years has been a director in the Mary-Leila Cotton Mills, Greensboro, Ga. He is a member of the Rotary Club, the Capital City Club, the Druid Hills Golf Club, and the Presidents' Club; and a director of the Chamber of Commerce, of Atlanta. He is a member of the executive committee of the Cotton-Textile Institute, Inc. He is a son of Professor J. C. Harris, head of the Georgia School for the Deaf, at Cedartown, Ga. United States Senator William J. Harris, and Major General Peter C. Harris, retired, are his uncles, and a sister, Miss Agnes Harris, is dean of women at Alabama Polytechnic Institute, Auburn, Ala.

Cotton Manufacturers of North and South Hold Joint Meeting at Atlantic City

Bringing together in a joint convention, for the first time since the World War, the members of the American Cotton Manufacturers Association and the National Association of Cotton Manufacturers, as well as representatives from practically every other phase of the textile industry, the meetings held in Atlantic City at the Hotel Traymore on Friday and Saturday, May 13th and 14th, represented the most comprehensive and far-reaching textile meeting, probably, that has ever been held. Practically every division of the industry, from the grower to the retailer, was on hand officially—and the addition of the Cotton-Textile Institute, Inc., to the two major associations gave the conclave a complete scope along the lines of organized representation. Just as the past year has brought radical changes in organized activity in the industry, so did this joint convention present some new and interesting changes in method and effect.

Important among the results of the meeting was the occasion provided, exclusive of the sessions, for personal contact between the various individuals representing different sections of the country and different branches of the trade. The goodwill and understanding engendered thereby is always incalculable in its effect. The two conventions merged into two joint sessions, one held on Friday afternoon with the subject of merchandising as the theme; the other being a joint banquet on Friday evening. The National Association held one separate business session on Friday morning, while simultaneously the American Association convened for a separate session.

American Association's First Session.

The first meeting of the American Association was opened Friday morning by President James P. Gossett, of Williamston, S. C., who after the usual preliminaries, read the annual address of the president.

In beginning his address, Mr. Gossett recalled the untimely death of Samuel F. Patterson shortly after being elected to the presidency last year and requested the members present to stand for one minute in silent tribute to the memory of Mr. Patterson.

Mr. Gossett devoted his address mainly to a discussion of farm problems in the South, and to the Cotton-Textile Institute. He said in part:

"Perhaps never in the history of cotton farming has the plight of the producer been more desperate than it is today. Many causes have contributed to this sad state of affairs, but I may mention only a few of them. First: there seems to be something in the very business of the small farmer which engenders a feeling of suspicion and distrust. This psychology isolates him and makes difficult any type of team work either with his fellow-farmers or merchants or bankers or manufacturers. It is small wonder that he is easy prey to the unscrupulous political demagogue. Second: he is in a rut, each year digging deeper and deeper until his head is eventually out of sight and the shallow rut has become his grave. Third: he is too extravagant. He hopes to make a living in 150 days while industry hums 300. He buys gas and tires instead of improved seed, and he dreams instead of thinking. Fourth: he plants cotton year after year, rotating cotton upon cotton and raising little with which to feed his family, his stock, or his land. I quote a recent issue of *Wall Street Journal*: 'What should be the most productive area of the United States does not feed itself.' Referring to the South from North Carolina to Texas this paper quotes Census Bureau figures to prove that in this area there are 2,559,435 farmers. 73 percent raised cotton, 12 per cent no corn, 54 per cent no hay, 86 per cent no oats, 56 per cent no pigs, 46 per cent no butter, 37 per cent had no dairy cow, 33 per cent no chickens, 58 per cent no sweet potatoes, 79 per cent no Irish potatoes, 76 per cent no cane for syrup, 95 per cent no pure bred animals and 23 per cent no garden.

"It is not surprising that the products of such farms should be of low value and that the percentage of 'seconds' should be so high. For convenience of discussion let me divide the cotton belt by the Mississippi river and refer to the sections as East and West. Thousands of farmers East are now producing a poor grade of nondescript or short staple cotton, some of which is utterly unspinnable in the fine numbers. In former years these same men from the same fields sold us splendid grades of 1 inch to 1 1/16 inch staple which was eagerly bought on our local platforms. This staple shortening has been brought about by the race against the boll weevil and by poor seeding and by gross errors in fertilization and by inexcusable neglect of the land. In the section West the staple measures longer and is of greater tensile strength but the western care of the crop before, during, and after ginning is of such character as to discount to a great extent the natural excellence of the product.

"Please understand, gentlemen, that I am not a farmer, nor an authority on agriculture. I have studied these problems closely and have collected a great mass of information from local, state and federal sources. But I am a manufacturer and know where to buy spinnable cotton. I also know that the freight rate of $5.00 to $6.00 a bale added to my cost sheet is an unnecessary hardship on my stockholders, a disgraceful waste of good money and a shame upon my local farmer friends. During the past year more than a million bales of western cotton have been shipped into Georgia and the Carolinas and more than a million bales of local cotton have been shipped out to give place to the western staple—two unnecessary hauls, which if figured at $5.00 per bale means ten million dollars loss for carrying charges alone, saying nothing of commissions and other expenses incident to handling.

"Now what is the remedy? It is certain that relief cannot come through legislation. No law can compel acre reduction, crop rotation, seed improvement, correct fertilization, nor proper handling of the finished product. No law can displace indolence with industry, idleness with energy, nor extravagance with thrift. Yet these things can be done and must be done.

"A recent report of Harvie Jordan, managing director, American Cotton Association, giving results last year in five cotton states on cotton demonstrations operated under the system of intensive culture, showed that the average yield of lint per acre was 498 pounds—the net profit per acre was $32.28. The faithful soils of the South still stand ready to return abundant increase when they feel the wise and loving touch of her loyal sons.

"Let me offer this practical suggestion in the educational campaign. The first thing to be done is to gain the farmer's confidence. His psychology of suspicion must be changed; by precept and example he must be taught that the spinner is his friend and not his enemy as he has so long believed. This can be done by taking him into our confidence, by manifesting an interest in his material, social and political welfare, but above all by intensive educational work in the whole field of agriculture. He should be shown that the spinner needs not more cotton but better cotton. The most direct route to the farmer is through his son at school.

"There are in the southern states at this time 1404 high schools assisted by Federal funds. To these may be added thousands more of slightly lower grading. These schools, each with a department of agriculture working under the State agricultural colleges, could be made to reach practically every cotton farmer in the South. With State and Federal aid these departments could be maintained with but little expense, while the American Cotton Manufacturers Association in concert with state associations and individual mills could encourage this work by offering small prizes through the schools to the successful cotton club winners—the details of which are easily workable.

"We have just harvested the largest cotton crop in the history of the country—a crop of more than 18 million bales—but according to all reports it will average very low in grade—possibly below Strict Low Middling—due largely to improper handling.

"What a terrible bill of indictment against the southern farmer! To produce a crop of such magnitude and then let it go to waste is to rebuke that Divine Providence who sendeth the sunshine and the rain and Who giveth the increase!

In this connection it is inspiring to note that we are not the only group interested in the farm problems. All the great railroad systems maintain agricultural bureaus in their organizations. Some of the finest of farm experts are in their employ, and they are performing a vast amount of educational work along the lines of raising and especially of marketing crops. The work of Southern railroads is especially to be commended by this body because it is so closely related to the assistance of cotton farming.

"Listen while big business as exampled by stocks and bonds speaks in the words of Otto H. Kahn, the great international banker. Recently before the Kiwanis Club of New York City Mr. Kahn said: 'It is no use asserting, as some people do, that there is really no farming problem which calls for action.******The authoritative figures showing the average yield of the farming industry are public property. They prove, beyond question, that there *is* a farming problem.******I would earnestly urge that the business community put forth its best efforts to aid the farmer and—what is still more important—to prove to him that it means to aid him, that it is sincerely interested in his well being, that it is not sitting comfortably wrapped in the mantle of its own prosperity and callously disregarding the plight of the farmer, but that it is genuinely concerned to see that good times which have to long passed him by, shall enter the farmer's door and abide at his hearth.' Let us all dedicate ourselves to such assistance as we may be able to render in the effort to bring about an improvement in these unfortunate conditions.

"The outstanding event under my presidency has been the formation of The Cotton-Textile Institute; indeed I regard it as the most conspicuous and brilliant transaction which has ever been achieved in the whole history of the industry. I cannot help expressing pardonable pride in the fact that this great constructive agency was conceived and brought forth during my administration and that I was permitted, on account of my official position, to have something of a leader's place in this work."

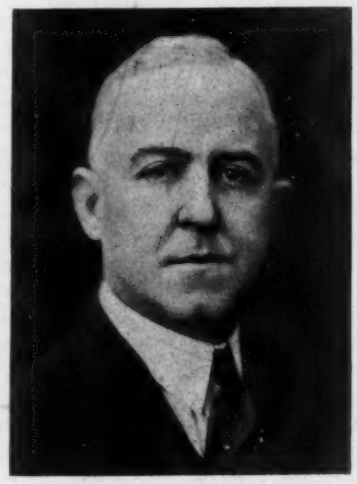
At this point Mr. Gossett, for the sake of record, traced the steps involved in the organization of the Institute, beginning with the submission of the idea at the Atlanta meeting last year. Continuing he said that, "The Institute is particularly fortunate in securing the services of Mr. Walker D. Hines as its permanent president and Mr. George A. Sloan as its secretary. Under their leadership

the Institute is bound to be of incalculable aid, not only to the textile industry, but also to all allied interests, particularly including the growers of cotton.

"The Cotton-Textile Institute cannot reach the full fruition of our hopes without including in its labors and research work the development and advancement of the cotton grower. Some way therefore must be found to bring the grower into the Institute and to make him a component part of it. I shall not attempt here to say just how this can be done, but it can be done and it must be done. This responsibility I pass on to the Institute whose officers have the brain and the vision for its discharge.

"Among the many other subjects which might be discussed in this paper I may mention: The manufacture and distribution of goods; trade conditions, domestic and foreign; taxation: legislation; etc. These matters will be treated in the sessions this afternoon and tomorrow. I must, however, call attention to the splendid work of the Association of Textile Merchants of New York in collecting and disseminating statistical information to the mills. I have great pleasure in acknowledging officially the wonderful assistance this organization has given to the textile industry.

"For the sake of historical accuracy again, let me say that when our committee conferred in Washington with Mr. Hoover he was instantly interested and soon expressed the keenest desire to help. He approved most heartily of our



W. M. McLaurine, Secretary, American Cotton Manufacturers Association.

idea of making the Institute national in scope and of inviting the New England spinners to join us, promising to stand by with whatever counsel and advice he could give. Of course we were happy to have his approval and endorsement and I have peculiar pleasure in recording prompt acceptance on the part of New England of our invitation. The hearty cooperation of our Northern neighbors has thus made possible the quick culmination of our plans.

"The organization of this great Institute has done more to bring together and to harmonize the North and the South than has any other single act, political or otherwise, since the Civil War, save only the calling out, commissioning and putting into active service by President McKinley during the Spanish-American War of those matchless soldiers and Ex-Confederate Generals Rosser and Butler and Wheeler and Lee! McKinley called forth these generals of carnage and war. This Institute has drafted the service of captains and kings of industry and peace!"

Mr. Emery's Address on Taxation.

The next speaker was James A. Emery, counsel, National Association of Manufacturers, who has appeared before the organization in the past. Mr. Emery selected taxation as his subject, stressing the fact that this is a business proposition rather than a political matter. He discussed it in his usual able way, saying in part:

"There is a popular delusion that expenditure for government in the United States is declining. Nothing could be further from the fact. Whether we consider the total sum spent for national, state and local government, the taxes levied for that purpose or the yearly borrowings, the annual expenditure mounts steadily higher. Whether

J. P. Gossett, President, American Cotton Manufacturers Association.

we view the cost of government in per capita terms of population or of the number of those gainfully employed whose production and service must provide the revenues, the individual burden is steadily enlarging. Federal reduction of national debt and taxation, an admirable accomplishment, creates the illusion of declining governmental cost, but every saving at Washington is met by equal or greater expenditure in state capitals or localities.

"Taxation is indispensable to government, as government is indispensable to individual and collective security. It is not the fact of taxation but its form and amount which threaten to make it oppressive and injurious. Only a new tax consciousness will stir our people to systematic effort to demand and secure reduction in the amount and reform in the method of tax levy and administration.

"Our first endeavor should be to realize the magnitude of expenditure for American government in all its forms, in terms of the the effort required to produce the essential revenue. Federal state and local government expended, in 1925, $11,500,000,000. A little over $7,750,000,000 of that amount was raised by taxation. Most of the remainder was borrowed and represents taxation deferred. Despite increasing population, it represents three times the per capita expenditure made for that purpose in 1913, and more than that in terms of those gainfully employed. But 34 per cent of that enormous sum represented the cost of federal government, substantially two-thirds was an expenditure

for state and local government. In 1903, we supported all forms of government for the sum spent by state, exclusive of local government, in 1925.

"The federal government, between 1919 and 1926, reduced the national debt from a peak of substantially $25,750,000,000 to $19,000,000,000, but during the same period, state and local government increased its debt from substantially $6,000,000,000 to more than $12,000,000,000. During the same period, per capita federal taxes fell from $42.86 to $27.38, while the sum of state and local taxation increased from $28.24 per capita, in 1919, to $45.18, in 1926. Federal debt and tax reduction has been equalized and counteracted by these enlargements of the local burden.

"Federal fiscal affairs have enjoyed efficient management. Can as much be said for state and local taxation? In 1925, but 17 of the 48 commonwealths were living within their income. Not more than three were pursuing a 'Pay as you go' policy. The individual who habitually lives in excess of income faces financial ruin. Is it not true of a state, a city, a county, or a township? Are those who must meet the paper to remain complacent?

"For what do these gigantic figures mean in terms of production, saving and self-denial of the citizen who must face the burden? It means that the annual expenditure for and by American government approached half the savings bank deposits of 1925. It is a sum almost equal to the value of all the crops raised on 6,500,000 American farms, employing more than 340,000,000 acres of land. It means our annual wheat crop, the largest in the world, would, if turned over to state government, about meet its expenditures for 1925. The largest producers of foodstuffs and cotton in the world, the value of both crops scarcely equals the spending of local subdivisions of our states. We lead the nations of the world in industrial production, but the net income of all the manufacturing corporations of the United States could not meet the combined expenditure for state and local government, nor could all the money in circulation in the United States pay their last year's bills. A billion represents the number of minutes measuring the flight of time since the beginning of the Christian Era. The expenditure for all forms of American government last year represents more than $11.00 for every minute since the birth of Christ.

"But, it will be said, however large this burden, the real issue is its relation to the value of our production and service and its influence upon individual initiative in the conduct and expansion of enterprise. We contemplate expenditures proportionate to our wealth and position in the society of mankind, but our capacity to produce is the foundation of our social power. The surplus at our command fixes the speed and quality of our progress, individually and socially. Now the expenditure by and for government is about 12 per cent of the gross annual value of our production of commodities and services. That is, it takes the equivalent of about six weeks of the year's work to express the expenditure for government in relation to our gross income. But, it is to be remembered that economists estimate that approximately 75 per cent of our gross production is consumed in sustaining our individual and social life and replacing, as it were, the wear upon our economic machine. Not more than 25 per cent represents, then, the fund from which we pay for progress. For, individaully and socially, we advance in every field through the use of surplus. For it is not the product of the farmer's acres which measure his prosperity. It is what he has over and above operating and living expense that permits him to improve his tools, enlarge his acreage, better his stock, repair his buildings, make the home more comfortable and enlarge the family life and the opportunities of his children. It is only what is left after operating expenses are met which permit a railroad to extend its facilities and improve its services. It is not the gross production of the 63 per cent of manufacturing corporations with net income, but the surplus they create which permits them to expand their plants, improve their machinery, and enlarge their productive capacity. We move forward by the margin above our consumption.

"Therefore, the taxable capacity of our people is not to be determined by comparisons between public expenditure and gross national income. Our taxable capacity is a reasonable relation to the surplus which represents the difference between what we produce and what we consume. Our problem is not how much of our gross annual production of wealth may we safely devote to public purposes but what is the proportion of our surplus to be given over to the purposes of government without discouraging and oppressing the individual or threatening the patrimony which produces the means of progress?

"What are we to do about it? Federal expense is pared to be the bone, we are informed, and the federal debt, thanks to the remarkable administrator at the head of the treasury, has been reduced amazingly. But there is great room for improvement in the form of the federal law, which is unnecessarily complicated, ambiguous and uncertain. It can be greatly simplified, its administration bettered, with gains in both time and expense to the taxpayer.

"Whatever organization and cooperation may be effected, the impelling force for reform in the method and reduction in the burden of taxation must remain, an aroused, tax-conscious, intelligent and determined citizenship. From it is required not only appreciation of the magnitude of our public expenditures and the dangers consequent upon disproportionate governmental outlay, but an even stronger determination not to ask constantly for new services from government or to seek salvation by legislation.

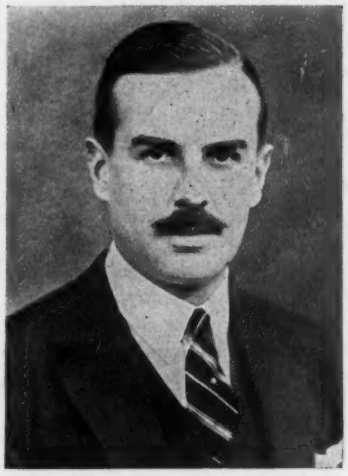
"If communities are to be encouraged or tempted to live beyond their means, if the Federal Government is to wet nurse its citizens, is to be constantly besought to lower railroad rates but raise railroad wages, to market crops but reduce the cost of food, to bureaucratize our life but to protect our liberties, to underwrite our undertakings but to reduce the cost of our living, we cannot hope to lessen the burden of governmental cost. Signs are not wanting that both state and national government are to be urged to develop and distribute electrical power on a great scale and as the forerunner of a new campaign for further public ownership and operation of various utilities. If suggestions of this character do not meet stubborn resistence, we shall not lessen but rather we will accelerate the multiplying cost of Government, while threatening the very sources from which reliable revenue flows. The only way to make government spend less is to ask government to do less.

"Tax reform is doomed to failure unless our people and our legislators recognize taxation to be a business and not a political question. If we permit our economic problems to be answered in partisan terms, we have only ourselves to blame."

The final address of the session was made by Dr. E. C. Brooks, president of the North Carolina State College of Agriculture and Engineering, who emphasized the importance of social relationships and contacts in industrial plants, declaring the necessity for studying causes of social irritation and industrial friction.

Morning Session of National Association.

The National Association of Cotton Manufacturers held only one brief separate session, on Friday morning, President William B. MacColl presided and opened the meeting with a few words of welcome. The only address presented was made by Miss Laurice T. Moreland, on the subject of style shows. Miss Moreland had charge of the traveling style show of the National Association, from January 15th



W. B. MacColl, President, National Association of Cotton Manufacturers.

to March 15th of this year. She outlined the show, explaining its procedure and itinerary, and made some interesting comments as a result of her observations.

What Price Style Shows?

Too many men and not enough women are passing upon or rejecting new designs in cotton fabrics before they are offered to the buyer in the retail store, declared Miss Moreland. "The guidance of women in the presentation of designs best suited to style tendencies and the checking of such designs with that feminine court of last appeal, 'would I wear it myself?', is needed in the industry. When a new design is created it goes from mill to selling house, to the jobber and to the wash goods buyer and all the way along until it reaches the retailer it is bought or rejected, ordinarily, on the basis of whether some man is going to like it or not.

"Few of these people, as a rule, can picture the material actually made up in garments of the season's mode and certainly not one of them checks it with that feminine court of last appeal, 'would I wear it myself?'. Greater style cooperation would enable any manufacturer to make the type of goods and the kind of design which the style tendencies and the living undercurrents affecting purchases subconsciously call for."

Referring to the style show, Miss Moreland said that "all of the department stores in the several large cities of the country where the exhibit appeared have expressed the desire for the show another year, and all except two have written to the Association asking for it. Some of them have reported that the fashion revue created a demand for yard goods in cottons and rayons, 'the like of which has never been known before'. They also expressed surprise that they felt a direct response from their trade which demanded the different fabrics modeled in the show.

"The exhibit demonstrated to about 25,000 women that rayons could now be trusted. It spread the knowledge of fast colors. It told women of the beauty, economy, variety and washable quality of cotton and cotton-and-rayon materials. A style show put on by an Association has the dignity and altruism of a movement made in the interests of the entire cotton industry. Another year it would be well to consider two classes of subscribers; one group to show their materials and dominate the show; the second group to be merely sustaining subscribers contributing a smaller amount of money and sharing only in the general increased interest in cottons.

"In the minds of the consumer and many of the retailers, the silk association for a number of years has presented a united front and has put over silks through sheer mass suggestions. A style show of this kind put on by the National Association of Cotton Manufacturers is, I think, an attempt in the right direction to establish cottons in the minds of the women and so benefits any manufacturer of any cotton material designed for dress goods.

"The average price of the most popular fabrics exhibited in the style show were: $1.25 per yard, 85 cents

Russell T. Fisher, Secretary, National Association of Cotton Manufacturers.

and 49 cents per yard. Three of the most popular dresses were highly priced as cottons go; therefore a reasonably high price is not a deterrent factor. These three were partially composed of rayon which would lead us to suppose that the brilliancy of rayon makes it of importance and value in practically all cotton fabrics. A medium weight seems to be the most popular. While there was considerable interest in the dimities and tissues, the prevailing feeling for the sport type of clothes even in the evening dress prevents a wide acceptance and interest in delicate fabrics from a purely style point of view. Of course, they tell us that more feminine clothes will be the vogue next year and if so, watch the dimities and tissues advance in interest.

"Many of the customers who buy the $1.25 materials are also in the market for less expensive materials for morning dresses and children's clothing. To educate wo-

men to have attractive kitchen dresses is going to do more to raise the standards of cotton than to pull them down.

"One of the buyers asked me why we bothered with any large sizes in the show. 'We get the fat woman anyhow; she buys cottons, it is the flapper we want to sell', he said. It seems to me the answer to that comment is that if the flapper sees the larger and older woman dressed in an ill fitting, badly chosen cotton dress, she is going to turn up her nose and not be at all interested in cottons, and the woman herself is going to hate the dress and therefore the fabric; while if this same older woman picks out an attractive material and makes it up becomingly she will have an increased respect for cotton and the flapper will not have an instinctive and pronounced reaction against it."

The Friday Afternoon Joint Session.

On Friday afternoon a joint session of the two associations was held, marking a new step for both Associations. The important subject of merchandising and distribution was the theme of the meeting, and discussing this subject were a converter, a commission man and a retailer. After the set addresses, a wholesome general discussion followed which offered an opportunity for the various factors to arrive at a better understanding of one another's conditions and problems. This session, as well as the joint banquet on Friday evening, was conducted under the auspices of the National Council of American Cotton Manufacturers. William B. MacColl, joint president, presided at the afternoon session.

Spencer Turner, of Turner, Halsey & Company, who is president of the Association of Cotton Textile Merchants of New York, was the first speaker. "I regard this meeting as one of the most significant in the history of our industry," he said. "In itself it indicates a recognition of our community of interest in all that affects the welfare and progress of this industry. In addition it culminates a year in which perhaps the greatest development has taken place in our attitude toward the conduct of our business as individual manufacturers and merchants. Somewhat the same spirit is spreading in the wholesale and converting fields. All of which augurs well for the growth and success of the industry and its constituent elements.

"It has become generally recognized that the wholesome competition which stimulates business is competition predicated on facts and an intelligent application of them to production and prices. Most industries long ago discarded horse trading methods and substituted for them cooperative endeavor. I believe it is significant of the trend of recognized business conduct that unlimited production, regardless of the various changes in demand and price, is no longer demanded of an individual manufacturer or of an industry as a whole. We have come to accept what is sometimes called 'rationalization' of industry as against cutthroat competition, as something really in the public interest.

"We in the cotton industry have begun to 'rationalize' our business and to adapt our individual policies to those facts which should guide all intelligent business operations. In the long run such a policy aims toward lower production costs, stimulates consumption, enlarges the usefulness of our products and increases our own prosperity.

"My feeling is that in the past year this industry has taken on a new attitude, a pholosophy of optimism, and a will and a determination to make profits. Our whole outlook has been changed and the result cannot but be helpful to all.

"Your sales representatives have been and are working together for the common good. Your mills are uniting for the same end through the Cotton-Textile Institute. The wholesalers are united in the belief that their success depends on cooperation with each other and with us. The converters know and avow the same principles."

M. J. Warner, president of the Converters' Association, was the next speaker. Mr. Warner said in part:

"Generally speaking, the cotton goods industry is in a deplorable condition, due as we believe, to something that is very much akin to what we read in regard to the tower of Babel, where on each landing there was spoken a different language. The industry of cotton goods is divided into five major branches, mill interests, converters, finishers, jobbers and retailers and a survey of each of the avenues of production will show that not in any unit will you find a rule of business that is in any way related to the principles of trading applied to any or either of the other branches. We have a civil war in the cotton goods industry, and news from the front indicates that at present the retail distributor is and for sometime has been most firmly and effectively entrenched; the converter in the forefront of the opposing lines, with a heavy casualty list, as shown by the credit reporting agencies."

Discussing the problems of the converter, he continued, "From the very nature of his business, the converter of cotton fabrics intended for garment purposes—for women's and children's wear—inaugurates his preparations in the early months of the calendar year—meaning February, March or April—in order that his lines may be completed and ready for showing during July and August, which is the expectation of the distributing and garment trades. The volume of goods provided by the converter, up to that time, expressed by deliveries and contracts, and measured in dollars and cents, is frequently twice the capital that he has in his business. Now we are up to the time—August—when he is ready to make his showing to the distributor.

"His exhibition is interesting to the buyers, but only in the sense that they may thereby be enabled to sense the style trend. At that early time, the best the converter can hope for is a complimentary reference to his skill and interprise there shown. There is a promise given, however, of further and careful consideration, when our representatives visit the buyer at his distant place of business during September, October and November. Those visits are made, the lines again carefully gone over, the buyer makes careful note of the fabrics that he most admires, places a tentative order, and promises to confirm when next in New York, which will be sometime before the first day of the coming year, or directly thereafter. That time arrives, and with it the buyer, and then there is another inspection of the goods. In many instances orders are placed, but for extremely moderate quantities of everything but sample cards; in the latter direction buyers are usually quite liberal. This is the very best that the converter can expect, but it is not all that he gets.

"It is not unusual for a buyer, then seeing the goods for the third time, to complain of the patterns shown being old, and inquires as to 'when do you expect to show your new goods'.

"Let us pass by those who are unreasonable or unreasoning, and follow him who has actually operated by the placing of small orders. Shipment is wanted in February, to-

gether with the sample cards, and when delivery is made he, the jobber, prepares to send his goods on the road during February and March, but little can be expected from his customer, the retailer, for the hand-to-mouth principle of buying provides what that term expresses, namely, that purchases shall be made only as goods are needed, and that late buying avoids the hazard incident to a possible change of fashion, or trade fancy, and so the converter waits until April to learn as to which of his developments meets with the approval of the consuming public, and then what? What is possible to us at that late date?

"For answer, we must turn around and face the mill, and there we inquire for certain wanted goods, and are told that a contract will be acceptable providing that you, Mr. Converter, agree that delivery shall start in six weeks, and with weekly deliveries thereafter of eight per cent of the quantities ordered. At that point, we turn to the East, and inquire of the finisher as to how much time he will need to give us the completed fabric, and are grateful for his promise to expedite the work, and start these goods toward us five weeks from the time when grey goods are delivered at his plant.

"Now to summarize: Six weeks for starting delivery, one week for transportation of grey goods to finishing plant, and five weeks for finishing; in other words, in three months from April 1st—or about July 1st—we can hope to have in our establishment, in finished form, the grey goods mill's first installment, and when the summer is practically over. That, however, is not the entire story; not even a reasonable part of it for we are still expecting eleven additional deliveries, and by the same formula the last of these goods would come into our house during the latter part of September; just in time to find the ladies donning their fur-trimmed winter coats."

Mr. Warner qualified the foregoing analysis as being "somewhat overdrawn", and applying particularly to specially woven fabrics; weaves that are novel in one respect or another.

The converter, he said, is rooted to his original foundation as to procedure, while the jobber, leans more and more toward the retailer's business policies, lengthening the period of inactivity of the converter, and throwing the cost of carriage onto the converter. "However," he continued, "it is impossible for us to pass back to the mill man any of this added responsibility. So far as they apply to his relations with the converter, the business rules of the grey goods mills are precisely the same today as they were 25 years ago.

"However," he emphasized, "let me remind you of the fact that the converter is your customer; that without him, the greater number of you would have the need of looking for a means of existence in some other line of endeavor. We are so inter-related that without one, the other cannot stand; aside from the few larger mill interests who are now of the thought that they can successfuly perform all functions of cotton goods production, including satisfactory service to the retail distributor, but they still have the need of showing that the conclusion is well grounded."

Mr. Warner now came to the purpose of his address, which, he said, was "the hope that you may conclude to join with us in the laying of a foundation upon which we can build a closer and more enduring relationship. In that connection, we respectfully submit for the consideration of your body that a worthwhile beginning would be the inaugurating of a tribunal that would function for the purpose of avoiding all causes of friction as between mill and converter, and thereby preserve and cultivate the spirit of good-will." In this connection, Mr. Warner offered a tentative resolution to the effect that the chairman of the meeting be authorized to appoint a committee charged with the duty of conferring with a similar committee from the Converter's Association, with a view of considering how best commercial arbitration, to promote harmonious relations, may be promoted and encouraged, the committee to report back to the respective associations.

Chairman MacColl announced that this suggestion would be referred to the executive committee of the National Council.

Harry Lauten, vice-president of the Converters' Association, followed Mr. Warner on the program. "Refuse to sell at a loss," he advised the manufacturers. "The solution of the problem of selling at a profit is not entirely in your manufacturing cost, your overhead or selling expense, or your cotton buying. If you, as sellers, knew the correct situation in the market at all times you could then dispose of your product to better advantage and without much doubt, at a profit. The buyer of your goods has a picture of the entire market before him, whereas you have been guessing what your competitor is doing or is willing to do. You have taken the buyers' statements far too often. They are incorrect most of the time. This method of buying cannot very well be changed unless your present method of selling changes it.

"Get all available information. Refuse to sell at a loss. The statistical committee of the Association of Cotton-Textile Merchants is doing splendid work. Their reports are clear cut and concise, and they take the guess out of the market situation and give you all a clear picture of the actual conditions. Realize the fact that selling at a loss does not increase the demand or consumption. When you sell goods at a loss the buyer is not anxious because they still appear too high but when the buyer actually needs and wants them, they appear attractive even though the price may be higher. This has been clearly demonstrated by a chart drawn up by one of your committee on 37-inch, 4.00-yard sheetings. The actual quantity bought and shipped, about 5,000,000 yards a month, showed little or no variation for each quarter, but the price changed from a fair price with low stocks to a very poor price when the goods accumulated. That tells the whole story and in my opinion holds good for any staple construction of cloth."

The fourth speaker, representing the retail division, was A. Lincoln Filene, general manager of Wm. Filene's Sons Company, Boston.

Mr. Filene, pointing out the inter-related problems of production and distribution, recommended the establishment of a trade relations group in the cotton textile industry, declaring confidently that he could induce the retailers to match any sum of money put up by manufacturers and wholesalers for this purpose.

There are three main influences, he said, which have brought about the need for closer understanding between manufacturers, converters, jobbers and retailers. The first, at work before the war, represents new and simpler forms of distribution—with manufacturers setting up retail outlets, and the retailer setting up manufacturing plants under his control. The second influence is the growth of chain stores and buying syndicates. The last influence he refer-

red to is style.

"Within the last few years," he said, "the factor of style has become of such magnitude in production and merchandising that in many lines it seems to eclipse all other considerations. The style impulse is as old as human nature. We have learned to know that style and quality are not different names for the same thing. Style has something of art and beauty in it, something of utility, something of the desire for the new, merely for the sake of its newness, and that it contains much that is as yet unanalyzed and unpredictable. Perhaps its most distinguishing and unfortunate quality is that it is often remarkably short-lived. Once styles were good for two or three seasons. Now two or three styles which arise and displace one another within a single season are not unheard of. Because style is short-lived, and when dead is very dead indeed, the retailer has been obliged to revamp his mode of operation accordingly.

"How is the cotton industry, with its large units, its system of distribution inadequate in many instances to changed conditions, its traditional separation from the retail market, to adjust itself to the style era? To put the matter in terms which will appeal at once to every manufacturer, how can the cotton textile manufacturer overcome the situation in which a New England manufacturer told me only the other day he had found himself? This man had thousands of dollars of merchandise in process of manufacture on his looms which was on order from jobbers yet which was of a style that had definitely died two or three weeks before." In part answer to this question, Mr. Filene told of "the department store which has very definite ideas of its merchandise needs, who have been able to find certain manufacturers who will set aside looms for them and manufacture goods according to their order and give them delivery at the times needed to meet sales demand." In the reverse situation, he added, "we have in the field of hosiery as an instance, the Gotham Hosiery Company, which has found it desirable to make a careful study of retail store hosiery stock. On the basis of this study it has devised model stocks ranging from $100 to $10,000 or more depending on the type of store. The restailer who enters into an arrangement with the Gotham company agrees to take one of these stocks. Each night it reports to the factory what it has sold during the day from this stock and merchandise is immediately sent in to replace it. If the stock fails to meet a demand in a particular store, the factory takes it back and replaces it with numbers that this store is finding salable. This system of merchandising has enabled the factory to adjust its production to sales demand, and thus create an economical and efficient functioning of the plant, eliminating the waste which results from intermittent production. It has also cut down sales expense by its thoroughgoing study of the individual retailer's needs."

There are certain manufacturers who maintain style organizations, he said; this, the maintenance of service stocks, the specialization of manufacture, further mergers and consolidations—are ways in which the textile manufacturer will adjust himself to the new order of things as style continues to spread over a larger range of items.

Mr. Filene referred to the National Trade Relations Committee of the Chamber of Commerce of the United States, which, he said, has the function of serving as the support for a piece of machinery to do away with unethical actions between producers and distributors. "Let us suppose," he said, "these abuses are cleared away, or at least minimized. The road will then be open for all branches of the trade to approach each other with confidence. This in turn will permit them to discuss cooperatively the numerous economic wastes that are involved in their relationship. If an organization were set up to embrace all factors in the textile industry, I believe it would find itself confronted with many opportunities for useful action. If it were to do no more at first than survey the present relationships within the industry, the new types of distribution that are growing up, it would be a lodestar to guide intelligent action. Such an organization would be informal and non-authoritative. It would scientifically and thoroughly paint the picture of just what we are all up against, and what are some of the feasible ways along which individual initiative can be expected to find a solution to the problems of our relationship."

There was quite a lively discussion subsequent to the addresses, largely conducted by Mr. Warner in further reference to the position of the converter; and Mr. Filene with reference to the retail situation. The chairman opened the discussion by asking Mr. Warner if it were not possible for the converter to allow some little more latitude than is customary, Mr. Warner said that the situation really is that the converter is not the only one who might take advantage of a technical situation, insofar as contracts are concerned, and cited several instances developing in an arbitration board of which he is a member, which showed a lack of cooperation on the part of the mill, and the need for a more sympathetic attitude between the mill and the converter and all branches of the industry as well.

The cases he cited and the conditions outlined in the discussion presented a condition which a contact and the discussion of mutual problems can iron out, and particular interest was therefore manifested in the possibilities involved in the suggested tribunal or trade relations bureau suggested by the two main speakers of the session in the discussion of merchandising.

C. B. Howard, secretary of the American Cotton Growers' Exchange, was the final speaker of the session, urging manufacturers to lend their influence toward the adoption of the net weight basis for purchasing cotton. This, he pointed out, would permit of the use of cotton bagging instead of jute; thus consuming a large portion of the crop as well as providing activity for many looms. This suggestion, Mr. MacColl announced, would be referred to the executive committee of the National Council.

The Joint Banquet.

The second and last joint session constituted the annual banquet of both organizations. On this occasion, Stuart W. Cramer, joint president of the National Council, was the presiding officer, and James P. Gossett, of the American Association, acted as toastmaster.

The chief speaker of the banquet—of the convention, in fact—was Walker D. Hines, president of the Cotton-Textile Institute, Inc., this being his first public address to the industry since his election to that position. His address was received with interest, representing, as it did, a discussion of the Institute's purpose to meet the urgent needs of the industry for more complete and continuous information as to supply and demand and costs and to increase the demand by extending the use of cotton goods. Mr. Hines spoke in part as follows:

"I am still too new in my connection with the textile business to be in a position to make a final diagnosis of

the troubles from which it is represented that the industry suffers. But I have already been long enough in this work to be able to express to you some present impressions and I wish to mention some of these so as to give you an idea of the direction in which my thoughts and efforts are tending.

"The first and most striking impression I have formed is that it is a very remarkable thing that in an industry of such importance and participated in by so many able business men there seems to be such a pronounced inability to sell the goods produced at prices which will pay the cost and afford a reasonable return on the investment. The industry seems in recent years to have shown an extraordinary hospitality to abnormally low prices. We have seen situations where, when the cost of cotton—the raw material of the industry—falls, the prices of cotton goods fall promptly and yet when the price of cotton rises, the prices for the goods show surprising reluctance in stepping up with the price of cotton.

"Nothing that I have seen or heard in connection with my study of the industry has led me to believe that costs of production are generally excessive, so I do not believe it can be said that the lack of reasonable profit is due to excessive costs. It would seem that the explanation must lie in the exceptionally low level of the prices and I believe every mill in the industry is interested in trying to find the cause of the abnormally low price level.

"Although I offer any explanation with diffidence, on account of the shortness of my opportunity for studying the subject, it occurs to me that to a very important extent the present situation in regard to prices is the outgrowth of the fact that the mills are in the grip of a lot of new conditions which have developed largely since the war. On account of the immense demand for goods during the World War, there was a great expansion in the capacity for production, especially through the development of methods for running mills night and day, although it is fair to say that even now there is much less excess plant capacity than is the case in some industries eminently successful, such as the steel and automobile industries. The War also brought about very vital changes in the cost of operation and in the burden of taxation. Apparently there have also been some significant changes in methods of merchandising, such as the hand-to-mouth buying with the resultant necessity for the mills carrying stocks which were formerly carried by dealers.

"These new conditions are inter-related for the entire industry so that no mill can adopt its own policies and make a success of them unless it has an opportunity to see the new picture which is the outgrowth of all these new conditions. As far as I have been able to find out this new picture has not yet been satisfactorily made. One of the principal purposes of the Cotton-Textile Institute is to aid you in making this picture so as to put you in position to see it clearly and to appraise your relationship to the whole situation in the new perspective which has been produced by the War and the post-war period. It will then be for each of you to draw your own conclusions as to what sound and effective manufacturing and merchandising policies shall be.

"One of the basic features of the situation is that of supply and demand. The correct and generally accepted principle is that it is normal and sound for prices to be the natural outgrowth of supply and demand. But I do not understand that the cotton textile industry is yet in a position to have a satisfatcory idea as to the existing facts or as to the probable trend of supply and demand. It is true that the Association of Cotton Textile Merchants has in the past two years done a most constructive work in supplying statistics as to production, stock on hand and unfilled orders. That Association deserves great credit for what it has done in this direction and its figures are about the only ones that help to depict the situation as to supply and demand. The members of that Association, however, would be the first to admit that their statistics are not and necessarily cannot be complete at the moment, even from the standpoint of the information derivable from the mills. The Institute is anxious to do what it can to aid in making statistics on these elements more complete and it is anxious to go further and cooperate with associations representing, jobbers, converters, finishers and others, to get a

Walker D. Hines, President,
Cotton-Textile Institute, Inc.

more complete picture than is possibly obtainable from the mills alone, so that the statistics derivable from the mills and also those derivable from the dealers can be put together for the more complete enlightment of mills and dealers.

"As these statistics become more and more complete and as we have a longer line of reliable statistics for the past with which to compare the present, everyone in the industry ought to be able to give increasingly intelligent and confident consideration to the question of overproduction. But even on the basis of present information, I have some ideas on that subject which I wish to put before you.

"For example, I know there is a disposition for every mill to assume that it is to its advantage to operate to maximum capacity, because thereby overhead can be spread over more units produced so as to reduce the cost of overhead per unit of production. I keep wondering whether this does not overlook the fact that beyond a certain point demand cannot be created by the mere act of production. If there is a given maximum demand within a year and if in the first six months each mill produces to capacity and thereby meets two-thirds of the year's demand in the first six months, it seems to follow mathematically that there will be occasion for producing only to the extent of one-half of the capacity for the second six

months unless the mills are going to run seriously ahead of the maximum demand. This would seem to indicate that what a mill would gain in the first six months in spreading its overhead over more units produced would be lost in the second six months through having fewer units produced over which it could spread its overhead.

"Of course, there may always be the feeling of the particular mill that it will be so fortunately situated that it can produce to capacity throughout the year and thus reduce its overhead per unit to the minimum and that it will only be some other mill or mills that will be unable to continue maximum production. But I cannot escape the conviction that in the long run a particular mill is not going to be able to obtain an advantage from such a course which, if generally adopted, will be injurious to all alike. In adopting such a course a particular mill is simply setting an example which will precipitate a general condition that will deprive it of its assumed particular benefit.

"It seems to me highly probable that a policy of producing at a yearly rate in substantial excess of the yearly rate of consumption will operate to create a situation where the mills will be either in a condition of pronounced overproduction or on the verge of overproduction with the result that they will be making all the time a buyer's market.

"I believe also that mills are likely to be misled by a dangerous fallacy if they assume that because goods are being currently bought at abnormally low prices this is adequate proof that there is ample demand to justify the current rate of production. It would seem not at all unnatural that the very lowness of the prices might encourage dealers to anticipate their future needs, with the result that at a later time it will be found that the demand has already been satisfied out of the high rate of production and that there is no demand left to continue to sustain that same high rate of production.

"Such statistics as are already avaliable for a series of years indicate that a season of high manufacturing activity in the early part of the calendar years has been succeeded by a pronounced falling off in the summer months. This raises the question whether production has not overrun the demand in the early part of the year, leaving an insufficient demand to admit of the mills keeping up the same rate of production during the summer. Along with this there appears to be frequently a falling off in prices during the summer, and a shrinkage in the margin between the price of the goods and the price of the cotton used in their manufacture.

"I find myself much impressed by these considerations and I have the greatest anxiety to get these matters still further cleared up by obtaining the most complete statistics by groups, covering a period of years, and getting an intelligent analysis of those statistics. When this is done, the results whatever they are ought to be immensely valuavle to the various mills in deciding upon sound policies for the future. One of the important purposes of the Institute is to aid in getting the necessary information so as to place it before the mills in understandable style for such use of it as they may think it wise to make.

"Another matter that very greatly interests me is the problem of cost of production. I am told that many mills have not perfected their cost accounting methods with the result that there is great diversity of opinion as to the cost of making any given sort of cotton goods. A mill may decide to enter upon the making of some additional type or construction of cotton goods on the theory that the price obtainable will produce profit, and yet an accurate cost accounting system would make it clear that this step would result in a loss instead of in a profit. Surely it must be in the interest of every mill to be in position to protect itself against a mistake of this character. It may also be true that a mill has made and will continue to make a given type or construction of goods resting on the idea that existing prices give a profit, and yet accurate cost accounting would show that as to that particular sort of goods there is a loss instead of a profit. Surely if the mill were more accurately advised as to facts it would either be more insistent upon getting an adequate price or it would be alert to discontinue that particular item of manufacture. I have found a widespread interest on the part of the mills in this matter of the more accurate ascertainment of the cost of making particular sorts and constructions of goods.

"The more production can be conducted along orderly lines, and the more enforced and drastic curtailments which must inevitably follow serious overproduction can be avoided, the more economical production ought to be and the more satisfactory conditions ought to be from the standpoint of the labor in the mills. While I do not profess to have any expert knowledge as to the conditions of textile labor, I am not aware of any reason why in this respect there would be an exception to labor conditions generally. I believe it is a generally accepted view that it is far better for labor to work with reasonable steadiness throughout the year rather than to work on a basis seriously in excess of the average rate of demand for part of the year and on that account be cut down drastically to a much lower rate of production for a subsequent period. I know that in the railroad field much attention has been paid to the problem of avoiding unnecessary ups and downs in employment and I am disposed to assume that corresponding considerations would be applicable in the field of cotton textiles.

"It also seems reasonable to conclude that stability in prices has a great deal more value to the business world than a condition of fluctuation and uncertainty. I take it that it is generally true that business men feel that whatever benefits they get from changes and uncertainty in prices are overbalanced by the injuries resulting therefrom, for they would perfer a condition of reasonable stability so they could make their contracts in orderly fashion in the justified belief that in all probability they would be able to compete on even terms rather than be faced with loss through a competitor getting substantially better prices through uncertain price conditions. In this connection I am struck with the analogy afforded in the railroad world. Formerly there was the greatest uncertainty as to railroad rates. Every large shipper was in a position where he felt he had to bargain aggressively and continuously to get a lower rate than, or at least as low a rate as the vigilant competitor. Nobody felt that in the long run this situation was an advantage to the business man. Inasmuch as the railroad was a public business which was capable of regulation in this respect, there rose a widespread demand for an absolute stabilization of railroad rates and this was brought about and I do not suppose there is a business man in the ountry who would willingly return to the chaotic condition which formerly existed, when he never knew whether, no matter what rate he got, he might not find

that some competitor had thereafter obtained a substantially lower rate. Of course, such condition of absolute stabilization could never be obtainable in our industry but the fact that in an industry capable of Government regulation there is such an earnest insistence upon absolute stabilization, suggests that a reasonable degree of it in our industry would also be in the public interest.

"I should think it was also fair to say that whatever benefits may be derived from rapid and uncertain changes of price for cotton textiles are not likely to insure to the benefit of the ultimate consumer. The individual that buys at retail is not apt to find he is the beneficiary of any fluctuations in prices which may have occurred aiong the line of the dealings in the goods which are finally sold to him. I take it that the interest in stabilization extends to farmer as to the price he receives for cotton and to the stockholders of the mill as to the price it pays for cotton. I should think both would be better off if cotton prices could be more stable through getting rid of any adverse influences which it is practicable to eliminate.

Another matter in which the Institute can be helpful and which I believe also would be a contribution to the public interest in the matter of economy and stability is in the direction of simplification and standardization, which are matters in which the Department of Commerce is greatly interested. It has been already suggested that at times a great many more different constructions of cloth are currently made than are needed to meet the real demands of the public; that as to some of the constructions the demand is so slight that they ought to be made only when specially ordered and that as to others the demand is so very slight that it would be in the public interest not to make them at all; and that in large part this multiplicity of constructions is not due to the real needs of the consumer but rather to efforts on the part of some distributor to effect some small variation in price. The Institute stands prepared to render its assistance in making studies along these lines and in cooperating with the Department of Commerce to whatever extent any branch of the industry may suggest.

"I now wish to turn to another phase of the Institute's activities and that is the phase of rendering all possible assistance in increasing the demand of cotton goods by ascertaining new uses and encouraging the extension of existing uses. In order to handle this matter, a Section of New Uses has been created in the Institute. The name is convenient because it seems to have been accepted by the press as an appropriate description of the scope of the work, but at the same time it must be recognized that it is a misnomer because the work will consist very largely in the extension of existing uses rather than in the discovery of absolutely new uses. This work will embrace the efforts to extend our exports and also efforts to encourage the use of domestic products in the place of our present imports of cotton goods, and further than that to promote a greater use of cotton goods wherever cotton can economically fill the requirements of the consumer. This work will involve a study of markets, and analysis of the various cotton fabrics, and competing materials as to relative merits, involving suitability, durability, quality and price.

"In the work of extending the use of cotton goods both at home and abroad, the Institute is fortunate enough to have the cordial support of the Department of Agriculture and the Department of Commerce, to both of which Congress has made appropriations to promote the use of cotton. For the first time in the history of the industry in this country, a committee has been formed consisting of representatives of the Departments of Commerce and Agriculture and of the cotton mills acting through the Institute for the purpose of prosecuting work of this character. This committee meets frequently and will seek to reduce to a minimum any duplication of effort and to secure the maximum results possible in the study of new uses for cotton products. We hope also to enlist the cooperation of all other Departments of the Federal Government and of State Colleges interested in cotton and cotton fabrics, and for other universities, colleges or schools doing research work, and the aid of the business press of the country, various trade associations, and various research laboratories.

"From time to time we expect to submit the analyses and studies on these matters to the members of the Institute with the hope of stimulating suggestions from them and getting their active support in promoting this part of the work. Questions of advertising in particular branches of the industry and especially through the group organizations to which I am going to refer, will probably arise.

Already the Institute has undertaken extensive studies of the existing and potential markets for cotton bags and has started studies as to wall covering material, wearing apparel and cotton towels. As an illustration of action which the Institute has been able to take, various State Highway Commissions have at the request of the Institute specified that cement for public construction work must be furnished in cotton bags. In the extension of uses for cotton goods, the Association of Cotton Textile Merchants of New York is cooperating heartily and we are in close contact with the Department of Commerce in our studies of the export fields. That Department has an appropriation available July 1, 1927, which will enable it to place a number of trained men in various important foreign cotton consuming markets for the purpose of analyzing those markets and we hope to benefit by the studies thus made.

"Several times I have referred to special instances in which our work proceeds in cooperation with the Government. I would like to add that I believe all our purposes are in accord with Government policies and it is my hope that at every stage we may maintain close contact with appropriate Government Departments and shape our efforts so as to have their support and so as to get the benefit of their advice and suggestions. I feel that all our objectives are so clearly in the public interest that it will be to our advantage to invoke at every stage Government understanding of our purposes and methods.

"To an increasing extent the work of the Institute will be carried on through group organizations. These are necessary because of the very wide variations in conditions affecting the different branches of the industry. While we speak of the cotton textile industry as a unit, it in fact consists of a great many different branches and each has its distinctive problems. It would be impossible to bring into a single meeting any very extensive representation of the entire industry. On the other hand, by organizing a group confined to one branch of the industry we can bring into a group meeting a very complete representation of that branch and the group will be in position to consider statistical problems, problems of cost accounting, problems of new uses, problems of simplication and standardization and any others that may arise. Already we have

formed a Wide Sheeting Group, a Narrow Sheeting Group, and have taken the initial steps toward the formation of a Carded Yarn Group and a Print Cloth Group. Other branches of the industry will be taken up in turn with the purpose of giving them the benefits of these group organizations. These organizations will not only be able to discuss the specific questions that may be referred to them by the Institute but will be able to initiate other matters in respect to which the Institute can be helpful. The very fact of these group meetings taking place from time to time will promote discussions and mutual understanding and will be of immense help in developing the general picture of the industry and of each branch of it which is indispensable to the most intelligent adoption of policies by the respective mills.

"In conclusion I wish to say that while the Institute already has the financial support of the mills which have become members, I wish particularly now to appeal to your full moral support in all that the Institute undertakes. It is important to bear in mind that the various steps which the Institute takes should never be appraised exclusively on the basis of the apparent merit of each step separately viewed. These various steps will fit into the general plan and they must all be taken together to enable us to arrive at our goal of giving the completest information to the industry and aiding it in the respects which I have outlined. Therefore, even though a particular mill may see no obvious necessity for a particular step, or may have misgiving that that particular step may involve the possibility of inconvenience to it, I emphasize the importance of full support notwithstanding, so that we may continue to make progress without interruption toward the general picture which we wish to provide for the full information of the industry.

"I wish also to appeal to all of you to offer without hesitation suggestions and advice. The Institute can best achieve its objects by full understanding of the intricate problems involved and it cannot have this understanding unless the members are willing to come forward and express themselves upon anything which interests them. We look therefore to the mill executives both for information and initiative. We will furnish all the initiative we can, we will obtain all the information we can; but even so we will be disappointed if we do not get fully and freely the advice and suggestions of the members.

"It is a fact of profound significance in the industrial and commercial life of this country that hundreds of cotton mills, North and South, representing more than two-thirds of the cotton textile industry, one of the leading industries of the country, have taken the step of forming the Institute and have enabled it to begin building an organization of the character I have described. The fact that this step has been taken bespeaks a new attitude on the part of the industry and from many quarters I get the testimony that the organization of the Institute has already had a gratifying psychological effect. I can say to you with great confidence that I believe the hopes thus raised are going to be realized and that very great benefits are going to accrue from the work which the Institute can and will do in accordance with the purposes of its founders."

Following Mr. Hines, Spencer Turner again addressed the delegations, reiterating his thoughts of the afternoon along the lines of cooperation and optimistic outlook.

William B. MacColl was the next speaker. He discussed mainly the anti-trust laws, characterizing the Sherman law as one which has never been a workable one. "I believe we should have the right to organize to regulate production and establish uniform cost standards under proper government control, if our business is to progress on a prosperous basis in this country.

"We are living in a new era since the enactment of these restraining laws. Big business has seen a new light. Responsibility to the public, and self regulation, rather than government regulation, have been generally approved. New methods are being adopted of combination and cooperative action by competing nations. Labor has, by the development of trade unions, profit-sharing plans, increased savings and capital ownership, established its right to combination. Agriculture has been encouraged to increase its cooperative selling which can only be effected by combination. The general trend in the cotton industry is toward consolidation. The creation of larger units will do much to stabilize prices and put the industry on a more profitable basis. We should go forth from this meeting with the earnest belief that our industry has passed through its worst period and is now entering into the dawn of greater prosperity."

George S. Harris, of Atlanta, was the next speaker, urging patience with the Institute in its work as well as cooperation. Robert Amory spoke next, declaring that in his opinion the textile industry is not overproduced, but that its production is not intelligently governed in accordance with consumption from season to season or year to year. For this condition, he said, the Institute occupies the position of a consulting physician.

American Association's Business Meeting.

The concluding session of the American Association convention was the annual business meeting, at which the election of officers was held. George S. Harris, president, Exposition Cotton Mills, Atlanta, Ga., was elected president, succeeding Mr. Gossett; H. R. Fitzgerald, of Danville, Va., was made first vice-president and Arthur M. Dixon, of Mount Holly, N. C., was elected second vice-president. W. M. McLaurine was re-elected secretary and treasurer. E. F. Woodside, of South Carolina, A. H. Bahnson, of North Carolina, C. L. Gilliland, of Pennsylvania, and Howard Baetjer, of Maryland, were named to the board of government. W. D. Anderson, of Georgia, succeeds Captain Ellison A. Smyth as a representative on the National Council, and Stuart W. Cramer was re-elected to a similar position.

Reports of the secretary-treasurer and of the various committee heads were made at this session. Upon Mr. Harris' election to the presidency, he was escorted to the chair by Ex-Presidents Beattie and McLellan.

James P. Gossett was presented with the retiring president's medal, and a beautiful sentiment was expressed in the presentation of a medal to Miss Mary Patterson, daughter of the late Samuel F. Patterson, whose death prevented service in the position of president of the Association to which he was elected at the Atlanta meeting. William J. Vereen of Moultrie, Ga., made the presentation speech.

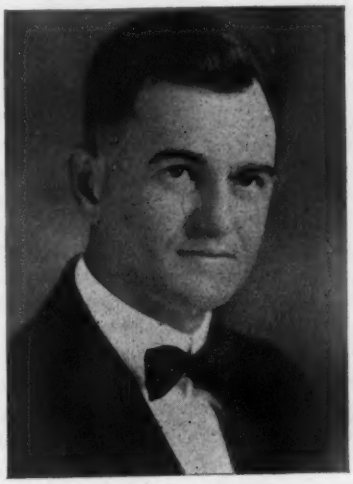
W. R. Smith with United Chemical.

William R. Smith, of Raleigh, N. C., has become associated with the United Chemical Products Corporation, Jersey City, N. J., manufacturers of aniline and alizarine colors, dyestuffs and chemicals, etc. Mr. Smith will continue to make Raleigh his headquarters and will travel that immediate territory in his new connection.

Weaving Division Meets at Spartanburg

One of the largest crowds on record for a discussion meeting of the Association attended the meeting of the Weaving Division of the Southern Textile Association, held on Wednesday, April 20th, at the Franklin Hotel in Spartanburg, S. C.

Inspection of cuts of cloth occupied the major portion of the sessions. This was in line with the effort of the division, begun at a meeting in Anderson, S. C., last year, to work toward some end of standardization in cloth specifications and defects. The method used was the same as that employed at the Anderson meeting. Chairman L. L. Brown, of Clifton, S. C., had secured eighteen different cuts of cloth, all of them sheeting and print cloth constructions, which at the individual mills from which they were taken would be classed as firsts, yet which contained various kinds of imperfections and defects—most of which were remediable. These samples were laid out on long tables, and the morning session of the meeting was given over to inspection of these cuts by some of the men present.



Chairman L. L. Brown.

Following the luncheon, which was efficiently served and which was embellished by some musical entertainment provided locally, the reports of those who had inspected the cloth were turned in, and the chairman endeavored to find out how nearly the morning's gradings approximated the original gradings as "firsts."

Mr. Barrell was the only one who failed to class No. 1 sample as firsts, and he had called it this with reservations, which he was asked to explain.

"I would take the sloughed filling out of it, and fix up a few thin places, and call it a first," he said. This wouldn't take but about fifteen minutes of a girl's time. Otherwise, it would be a second."

"That is a point in the cloth room that I would like to bring up right now," said Chairman Brown. "I know of an instance where a mill of approximately 50,000 spindles recently changed managements. Under the old management, the mill had been making between two and three per cent seconds, including short lengths. The new management told the superintendent that he wasn't making enough seconds. That is the first time I ever heard of that subject being brought up in that light. He said that by cutting his cost down $100 a week, running day only, he increased the seconds up to four to six per cent. The point is for everyone to decide—whether by spending money in the cloth room we reduce seconds, or whether to make the seconds. That is the problem which you will have to work out for yourselves. Are we spending too much money to cut our seconds down too low, or may we spend more money in the cloth room and benefit by it?" Mr. Brown asked W. H. Gibson, Jr., president of the Association, for a comment.

"The situation is like that sample we had a while ago," Mr. Gibson responded. "If you have a double cut of 120 yards, and are going to lose five or ten per cent by putting it in seconds, it is worth putting fifteen minutes of a girl's time on it to fix it up and put it into firsts. We have had that up time and time again in mills that I have been connected with, and we have always tried to figure what we would save by putting the extra work on it to put it into firsts." Mr. Gibson then called on J. W. Sherbert, of Clifton, S. C.

"It depends on what kind of a piece of first-class cloth you are going to make after you spend that time on it," he declared. "Some men would say you can put it in firsts, but what kind of firsts have you got? If you would spend fifteen minutes on every piece you can see where you would get to. Personally, I do not think the cloth room is the place to make the firsts. I think they are supposed to be made in the weave room. I think it is only that room's place to fix it up with the cooperation of all the whole mill, with eternal vigilance that will lower seconds and cost and increase the production of the mill."

"With the very best of management," declared W. B. Williams, overseer weaving, American Spinning Co., Greenville, S. C., "you are going to have some cuts of cloth that will have these imperfections in them, and along the line of what Mr. Gibson said, if you have 120 yards and lose ten per cent by throwing it into seconds, when it would take fifteen minutes of a girl's time to fix it up, if you would let that go by and not fix it up, and the goods sold at eight cents a yard, brought $9.60 and you lost ten per cent that would be 96 cents, and if the girl's time would cost 22 cents an hour, that would be 5½ cents for the fifteen minutes, which would be a saving of 90½ cents. It looks to me like that would be profitable."

"Mr. Williams, I do not know whether that meant that they would lose ten per cent of the value of the goods, or ten per cent in seconds, with 90 per cent going into firsts," explained Mr. Brown.

"Well, even if you lost five per cent that would be 45 cents in this case," added Mr. Williams. "The main question is whether or not you are going to hurt the reputation of your goods in the end."

"It is simply a matter of mathematics," explained Mr. Brown. "It is up to the mill man in each case to determine which would be the more profitable to him under the prevailing conditions."

"But," Mr. Dillard of Whitney stated, "if you put it in seconds, you might be working against orders and have no sale for the seconds, and by putting it in firsts you would get that off of your hands."

"I keep the weaver informed of the seconds he is making," said Mr. Barrell. "It is my policy to keep the weaver in close touch with the cloth room to let him know exactly what he is making. I do not think we should work them up and not say anything to the weaver about them, and let him go along thinking that he is making first-class goods all the way through."

"I referred to this particular piece of cloth," explained Mr. Gibson. "This man said it could be made into a reasonable first, and that is what I based my statement on. I might say further that a system I have seen work, was every day all the seconds with bad places were sent back to the weave room and they were called to account for them, but afterwards they were sent back to the cloth room, and a special girl regraded them, cutting out all of the bad places and grading them as firsts and seconds, fixing up what could be fixed up to be made into reasonable firsts."

Mr. McAbee of Henrietta Mills said that he thought the cloth room overseer and superintendent should pass on the cloth by themselves. Mr. Barrell said he wouldn't throw cloth into seconds without informing the weaver of it. "I know of a mill that had a good deal of trouble with seconds," said Mr. Brown, "and the superintendent had his assistant and the weaver come in every afternoon and go over every piece of the cloth in seconds and discuss the reason in each case. This kept the cloth room man from shoving goods by and calling it seconds, and it gave the weaver a daily check on just what he was making."

J. N. Alexander, superintendent, Courtenay Mfg. Co., Newry, S. C., raised the point that the biggest defect in the sample under discussion had been caused in the card room, and he thought that the trouble, as in this case, should be traced down to the original source.

Mr. Clarke of the Beaumont Mfg. Comapny was asked to explain his method of reaching all of the overseers, and he stated that they held a daily meeting of the carder and spinner and weaver around the cloth table, and that they were always able to fix the responsibility among themselves, and in this way were able to reach each overseer.

Mr. Alexander raised the question whether each overseer saw all of the seconds or only those made in his department, and Mr. Clark explained that all of the overseers see all of the seconds. In a vote taken on this, all but one of the men present indicated that this was the case. Mr. McAbee, the exception, said "he doesn't let any of them see the seconds he is making if he can help it."

There followed some discussion on each of the samples of cloth inspected, the majority classifying the pieces as firsts, some of the men stating that this would be their classification with a little work being done on the goods. In a few cases, however, large oil spots, etc., prevented several of the men from putting some of the constructions in firsts.

Chairman Brown next put before the meeting the following question: "What causes streaky places warp-way in plain fabrics?" He explained that this did not include streaky places filling-way of the goods.

"The only thing that occurs to me that would make streaks in the warp," said F. S. Lockman, of Lockhart, S. C., would be different twists or different sizes of yarn. Different twists in the filling will make streaky cloth filling-way, and so it stands to reason that different twists in the warp would make streaky places in the warp."

"I have never woven any cloth that had uneven warp," added Mr. Williams, "but I have had experience with smoke from the railroad getting on our yarn and causing streaks. I am in the dark as to just what the question means. I do not know if it is an uneven lay of the warp threads. The only thing I can think of that would cause that would be an uneven lay of the reed. I have had cotton of different colors, but the mixing would take care of that, and it wouldn't cause unevenness in the weaving. I have had smoke settle on the bobbins and leave a little smut, but it would come out in the bleaching."

"Fire around the speeders will do the same thing," commented Mr. Gibson.

L. V. Andrews, superintendent, Edna Cotton Mills, Reidsville, N. C., stated that on a 72 x 72 weave, "I have seen the calender roll bearings get worn and twist the cloth around so that on one side it would show up a little open place, but be all right on the other side."

Reporting of the morning's inspection was continued, and when one sample showed up with some cockled filling it it, Chairman Brown asked "How many have had more trouble with cockled filling in the last six months than in recent years?" He indicated that this was his experience, but the number standing on this with him was comparatively small.

At this point the chairman read the results of a questionnaire he had submitted to the mills. The answers were based on 34 answers received.

"Do you inspect on folders?", was the first question, and three men indicated that they use this practice. The other 32 answering replied negatively.

To the question, "Do you inspect on machines?", 22 replied "Yes", and 12 "No".

"Do you inspect on both sides?", was next. Six replied that they do, 28 do not.

As to the yards inspected on the folders per hour, of the three replying, one man inspects 1,300 yards, one man 3,569 yards, with an average for the three of 2,323 yards per hour.

As to the yards inspected on the machines per hour, the highest figure reported was 2,100 yards, the lowest 250 yards, giving an average of 1,136 yards per hour.

The next question asked for the number of yards inspected by hand per hour. One man was extraordinarily high, reporting 1,970 yards per hour. He explained this by stating he runs his mill night and day, with a weekly production of 400,000 yards, and inspects only in the day-time. However, he said, the goods are passed to the grader after the inspection, and following the grading the head inspector goes over the goods.

"In figuring the percentage of seconds, do you include pieces under 40 yards?" This was the next question, which the chairman said 29 answered in the affirmative and five in the negative.

The next several questions were to determine the range of lengths of the "short lengths". The chairman had asked what percentage of the short lengths were between 1 and 10 yards; what per cent between 10 and 20 yeards; between 20 and 30 yards; between 20 and 40 yards; and between 30 and 40 yards in length. The following figures give the compilation of the replies, as to the highest and lowest percentages, and the averages, based on all replies made:

Between 1 and 10 yards: Highest, 3.3 per cent; lowest, .1 per cent; average, .34 per cent.

Between 10 and 20 yards: Highest, 3.15 per cent; lowest, .2 per cent; average, .56 per cent.

Between 20 and 30 yards: Highest, 6 per cent;

(Continued on page 779.)

The Eastern North Carolina Division of the Southern Textile Association held its semi-annual meeting on carding and spinning at Rosemary, N. C., in the school building of the Rosemary Mfg. Company, on Friday, May 6th, with a fairly good attendance. This organization is composed of the superintendents and departments heads of the mills in the eastern part of the state, and was formed to permit concentrated discussion upon the problems of soft yarn production, which represents the production of most of the mills in this section.

C. M. Black, superintendent of the Borden Mfg. Co., at Goldsboro, N. C., conducted the meeting as chairman of the division. T. W. Mullen, superintendent of the Rosemary Mfg. Co., head of the entertainment committee and at the meeting was elected chairman of the organization, to succeed Mr. Black, who refused re-election. Norman B. Hill, superintendent of the Caswell Cotton Mills, Kinston, N. C., is secretary-treasurer of the division.

The attendance of mill men at the meeting was augmented by the presence of the senior class of the Textile School, North Carolina A. & E. College, of Raleigh, headed by Dean Thomas Nelson and several of the professors, including T. R. Hart and J. T. Hilton.

After a brief talk of welcome by J. T. Chase, local manager of the Carolina Division of the Virginia-Carolina Power Co., Chairman Black at once opened the meeting for practical discussion on carding subjects, asking first for questions from the floor. W. D. Knight, superintendent, Rocky Mount Mills, Rocky Mount, N. C., asked if anyone could give information on using the Buckley beater in the picker room. Mr. Black explained that about a month previous a textile magazine had published an article about the Buckley being used throughout the pickers in lieu of the blade beater. No one present was in a position to furnish data on this question.

Setting of Feed Rolls.

The chairman then started on the selected questions for the meeting, as suggested by the questionnaire committee. The first was, "How close should the feed roll be set to the beater on 7/8-, 1-, and 1 1/16-inch cotton, breaker, intermediate and finisher.

"I cannot tell you about the 1-inch and 1 1/16-inch," responded D. F. Lanier, superintendent, Oxford Cotton Mills, Oxford, N. C., "but on the 7/8-inch I have experimented quite a bit, and I set them as close as I could get them on one line of pickers, and on the other line I set them as far away as possible—I even cut the frame out a little—and I could not tell any difference in the breaking strength or character of the work except that the yarn was a little cleaner where they were set closer."

"Did that apply to all the pickers?", asked the chairman.

"I set them to about 5/8-inch on the finisher, and dropped off a little on each one giving 7/8-inch on the breaker," replied Mr. Lanier.

Mr. Craven of Goldsboro reported that he finds about 1/4-inch setting on all of the machines to be the best arrangement.

Blows Per Inch.

The next question from the chairman asked for the blows per inch on breaker, intermediate and finisher. Speaking for his own mill, Mr. Black said that "we have 42 blows on our finishers, 36 on the intermediates, and 42 on the breakers. We have what you might class as three different kinds of cotton—full inch, 7-8-inch Strict to Good Middling, 7/8-inch Middling to Strict Middling, put into our lower numbers." He added in response to a question from Mr. Mullen that his beater speeds are, breakers 1088 r.p.m.; intermediates 1,050 r.p.m., and finisher carding beater, 900 r.p.m. Mr. Mullen stated that he is getting about 52 blows a minute at his mill.

Feed Plate Settings.

"What settings do you recommend for the feed plate to the licker-in?" was the next carding question. Mr. Culbreth reported 7/1000 on inch cotton, and 10/1000 setting on 7/8-inch stock for coarser work. "We are setting ours to a 10, carding 178 pounds a day, 7/8-inch staple," said Mr. Lanier. Mr. Knight uses a 7/1000 gauge on 7/8-inch stock, carding 106 pounds a day.

"In this connection," offered Mr. Black, "I happened to

be reading an article the other day in which some man made the remark that with a closer setting of the feed plate to the licker-in he got more fly in the card room and spinning room than with it set away. This man said by opening up on the feed plate he could see that the fly in the spinning room decreased, and he had nothing like the amount of lint on the frames. Of course the humidity will have some effect on the lint, but if it was that noticeable something else did something to it. Have any of you experimented on this?"

Card Drafts.

The question of the best draft on cards was next discussed. It seemed to be the opinion of most of those present that a draft of around 100 is most satisfactory for the work being made in the mills of this section.

"Making a 60-grain sliver, we use about 100 draft," said Mr. Lanier, "and we feel this is the best draft we can get. We have changed a little each way, but we feel we get better results with 100, with the amount of work we are putting through our cards, the class of cotton and the weight of the sliver."

Mr. Haily of Kinston said he gets best results between 100 and 110.

Asked for reasons for his belief on draft, Mr. Lanier said he felt he gets better numbers, the counts run more regularly, and he makes a lot smoother yarn with the 100 draft. He pointed out that Mr. Haily with 110 draft and better results might have been more honest with himself. "I had an idea that 100 was the best draft," he explained, "and I went up to 109 and down to 91, but felt I was getting better results at 100." He said in answer to a question from the chair that he had no change in the staple of his cotton during the time of making his tests.

"I have used both 100 and 110," said Mr. Haily, "and so far as finding any difference between them I cannot see any. I get just as good results, on 1 1/16-inch stock, with one as with the other. If anything I get a little cleaner work at 110 than at 100.' '

M. R. Vick, overseer of carding, Rosemary Mfg. Co., explained that Mr. Lanier found 100 best possibly because he is on coarse work and using a heavy lap.

On inch cotton, Mr. Craven said he had tried 120 and found his breaking strength was better from 100 than from 120. He uses a 15.25-ounce lap, making a 50-grain sliver. Mr. Lanier runs a 15.62-ounce lap, making 8s to 12s.

Professor J. T. Hilton of Raleigh reported that in 1916 he had made card draft tests ranging from 80 to 150, going up by 10's, and had found between 95 to 105 to give the best breaking strength because it distributed the carding better all the way through. He explained that with a 15-ounce lap, carding 150, it took more fibers to the inch, with consequent less cleaning, and that with a 10-ounce lap there was so much to be fed in that the cleaning could not be secured. With a 12-ounce lap and the draft mentioned he got the best breaking strength, around Draper standard.

Card Production.

The final carding question occupied more discussion than all of the preceding ones. The first part asked "What is the best and safest production on cards to give good clean work?"

Mr. Mullen reported that they tested 100 and 120 pounds a day, making a 60-grain sliver for 20s and 22s warp and 15s to 22s filling, and "we could not see any difference in the class of the yarn or in the breaking strength, and we are now turning out between 120 and 130 pounds a day, using slightly under Middling inch cotton."

"I would recommend between 75 and 100 pounds a day," said J. O. Brown. "I find the lighter carding you do the cleaner sliver you will get out of it. We are carding about 130 pounds on local Middling cotton."

R. C. Huffines, Jr., in charge of the Cumberland plant of the Rockfish Mills, Inc., when called upon, said that "recently we have made rather extensive tests, running from 80 to 120 pounds, and we got best results from around 80 pounds per day on 30s. We have three mills, and in the Cumberland plant we are running 84 pounds on 30s, using 1 1/16-inch Middling cotton, making a 50-grain sliver."

"I have had quite a bit of experience on this," said J. E. McAlister of Leaksville, "and I find that from 90 to 110 pounds per day gives me better results for cleanliness on Strict Middling cotton, 7/8- to 1 1/16-inch cotton. We also use a low-grade cotton, and I can card 120 pounds if we are not particular about the cleaning, but on the regular work we get best results between 90 and 110."

Variation in Card Sliver.

The second part of the question asked "What is a reasonable variation in card sliver, in grains per yard?" In other words, Mr. Black explained, "when your drawing varies, what do you consider a safe variation to allow in the card sliver before you get worried about that causing it?"

"Carding 170 pounds a day," said Mr. Vick, "a card variation of seven or eight grains per yard will not make much difference after it runs through two processes of drawing, provided the drawing is properly kept up. Sometime ago I took out one end on the first drawing and ran it and then put it in the finisher drawing, and the variation wasn't any or much greater than ordinarily—about two grains. I think if a man can get his drawing variation not over two grains regularly it is reasonable. I think eight to ten grains on the cards is not too great a card variation, and I do not think you will have very many laps that will run less than that."

"I think my card variation will run up to eight and ten grains, but on my drawing sliver I hardly have over three grains in that," added Mr. Haily. Mr. Craven said he has a variation of from two to six grains in his card sliver and about one to three grains in his finisher drawing.

Mr. Lanier asked here whether the method of testing was to take ten cards right along together, or to test just before stripping and just afterward, declaring the latter method would give more variation. In doing it in this way, he said, he found between four and six grains variation, and he felt like it would give good numbers in the spinning room with no kicks on the yarns if he can hold it to that. The chairman explained the method in mind was testing the sliver mid-way between stripping times.

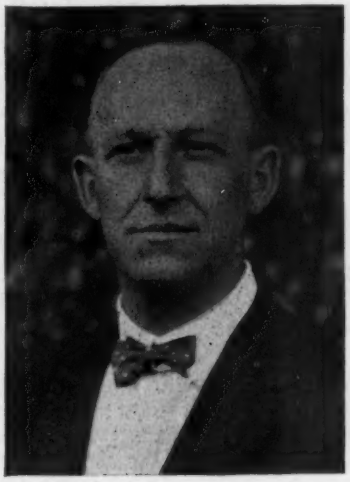
On 30s, Mr. Huffines reported, his finished drawing weights never vary more than two grains. He explained that he uses slight humidification in the card room and that by this method he holds his drawing weights remarkably well.

In Mr. Vick's opinion, it is impossible to get a variation under four grains in any lap, by weighing continuously for ten minutes from one lap. Mr. Haily said he had

taken 100 weighings from the same lap and found as high as ten grains variation, and then weighed from ten cards, ten weighings before stripping and ten afterward, and had never been over ten grains either way. "And I have been a whole lot under that. I have weighed up from ten cards and not gotten over six grains. I have taken two laps that were a pound heavy, and two that were a pound light, and run them the same way and I couldn't tell one from the other so far as the variation was concerned."

"I made a test similar to that," said the chairman, "and I couldn't see much difference in the variation in the weight of the sliver, one weighing one pound over and one a pound under standard."

David Clark of Charlotte here related an experience at one of the first carding discussion meetings of the Associa-



C. M. Black, Chairman,
Eastern North Carolina Division.

tion, declaring that several good carders had been asked to make tests (a) holding the laps to 1/2-pound variation, and (b) letting them run to three pounds variation, and that with one exception, every man reporting said he could not tell any difference in the variation of the finished sliver. It is impossible, he stated, to get two men to set a card the same, or one man to set two cards the same, and that when the yard-to-yard variation is considered, he feels that the expense of holding laps down is a useless one. He stated that the Naumkeag Steam Cotton Company of Salem, Mass., does not set any laps back, using evener drawing, which the South "discarded" years ago, and holding the weights at this point.

Mr. Vick said that he allows one pound variation in the weight of his laps, letting the laps run a little heavy in damp weather. Mr. Huffines did not agree with Mr. Clark, declaring he felt it necessary to hold his lap weights to a standard; that if he did not the variation further on would be too much to control. J. E. McAlister said he allows half-pound variation each way. A. B. McAlister answered the chairman by saying he has been on colored work for the last fifteen years and that with this it is wellnigh impossible to gauge it when the cotton is wet; "you have to do the best you can and go ahead with it."

Humidity in the Picker Room.

"Has anybody tried humidity in the picker room?", asked the chairman. "About four years ago I was doing some changes, and put in a head in our picker room, and put the hygrometer in there and couldn't tell any difference. Finally I was reading an article and found out from the man that I was pumping all of the humidity out through the draft pipes.

"However, Mr. Vick states that he runs his laps heavier in damp weather which shows that humidity does have some effect on it. Why couldn't we condition the cotton a bit in our picker room or even in our opener room?"

A. B. McAlister said that they are just preparing to put in humidifiers at their mill. "But that's on colored work?", inquired the chairman. "Well, we run some white work," replied Mr. McAlister.

Five Ends up at Drawing.

With the carding questionnaire covered, the chairman turned the meeting into discussion of any questions to be presented, and started it by saying, "I have a question I would like to ask in regard to carding. I was visiting a mill a few weeks ago that makes 30s and 32s, also 16s and 20s, colored and white, and I noticed he had five ends up on his drawing. I asked him about this, and he claimed to get more even work with five ends up than with six. Has anybody here had any experience on that?"

"I worked for a superintendent a few years ago who

T. W. Mullen, the Newly Elected
Chairman of the Division.

found the mill short of cans, and wanted to economize," said Mr. Lanier, "and he cut out one end on the drawing. We ran that way for about three years, on coarse and fine drawing, and after a while the market conditions got so that we could not sell our product, and it was all on account of quality, and we were forced to put the six ends up on our drawing, and when we did we got over all of our troubles. The five ends gave us more variation, and the breaking strength was not as good."

Mr Black repeated here that the friend he visited insisted that with the five ends up he got better breaking strength on 30 and 32s.

Spraying Oil on Cotton.

The next question brought up by the chairman was with reference to oil spraying cotton, and the discussion on this subject was favorable to the system. Mr. Black asked various questions concerning it, as to the effect on breaking strength, etc.

"I do not know as we get any better results on breaking strength," said J. E. McAlister, who had indicated that

he was using it. "But we do have less static in the card room, and it keeps down a lot of dust and makes the work run better and makes it much more easily drafted; this is on white work."

David Clark reported that the oil spray is being used with satisfactory results at a mill in Loncolnton in which he is interested, where 3/8 of one per cent is being applied. He added further that he had visited a 30,000-spindle mill where the oil was being used on all the hoppers, and upon telling the superintendent he understood that the mill had thrown out the process, received the reply that "we wouldn't throw it out; we couldn't get along without it today." Furthermore, he told of a new mill, somewhat larger, which, on the basis of the company's previous experience, had ordered the oil spray installed before the mill was started up. This organization, he said, found that it saved about one per cent in the waste.

"Is there any variation in the numbers?", asked Mr. Vick. Mr. McAlister said he had less variation in the yarn with the spray, and Mr. Clark affirmed this, adding that it made the cotton draft more easily.

"Did you change the weight of the lap?", was Mr. Vick's next question. Mr. McAlister said he uses 3/10 of one per cent and that no change was made in the lap weight to provide for the negligible difference in the weight of the oil and the cotton.

Mr. Black said his friend he had visited was using ½ of one per cent on white and colored work, declaring that the results were better on the colored stock.

Professor Hilton reported tests using from one per cent down to 1/3 of one per cent, and said he got best results, less waste, higher speeds, and better breaking strength using the smaller amount named. At the same time, he said he tested putting it in at the breaker picker and also blowing it on the backs of the laps on the finisher and the results observed were about the same with the two methods.

Fan Speed in Pickers.

"I want to ask about fan speeds on lappers," requested Mr. Haily. "Which is better, a high or a low speed?"

Mr. McAlister reported that "I run mine between 1,000 and 1,200 and get good results. I think it depends on the speed of the beater and also how much you want to clean the cotton."

"We run our fan speed around 1,000," said J. O. Brown, of Roanoke Mill No. 2, Roanoke Rapids, N. C. "Our beaters run 1,050. I have run higher and lower fan speeds, but have adopted 1,100 as the best place."

"I think a good fan speed is enough draft to draw your cotton well away from the beater," declared Mr. Vick. "In some places it takes a little more speed than in others. I do not mean to draw it too fast. If you do you will draw dirt too, but I believe in not too high a speed, and I think that Mr. Brown is about right with 1,100.' '

Causes of Flats Loading.

Mr. Moore of Edenton Cotton Mills, Edenton, N. C., requested discussion as to the causes of flats loading up excessively. In reply to this question, Mr. Vick said that "carding is done on the principle of centrifugal force, and any heavy material going from the pickers to the cards will load the flats quicker than if the cotton were thoroughly cleaned in the picker room. Of course, we cannot get all of the dirt out in the lappers and will have a certain amount of loading any way, but I believe that too fast a cylinder speed will cause flats to load quicker than a slow cylinder speed. We have some cards running 165 r.p.m. and I have run them as high as 175 r.p.m., but did not get as good results there. This is all on colored work. The flats will not load as fast at 165 as at 175 r.p.m."

"My experience is that if you grind a flat a little heavy it will not strip as clean," said Mr. Haily. "The cotton stays in there, and if you do not run a burnisher over them they will load up more. I have had a lot of experience with this and to get rid of it, I took a brush roller and covered it with stripper fillet and cleaned the flats out, and use my burnisher a little more often, and I do not have as much cotton in the flats."

"The best remedy I have ever found for it is light grinding," added J. E. McAlister. "But there are a lot of things that will cause the flats to load up. Heavy humidity is one thing. I do not see that the cylinder speed would have anything to do with the loading up because the flats are speeded up too, in proportion. I find the biggest trouble is in the humidity."

"I might say in connection with fast cylinder speeds that it is one of the questions submitted by the questionnaire committee that we omitted," explained the chairman, "but while we are on it we might ask if anyone is running 175 r.p.m. on the cylinder." Mr. Haily replied that "we use 175 r.p.m. all of the time. We have run 165 r.p.m. and do not see any difference at 175 r.p.m. in the loading of the flats."

L. R. Gilbert, manager, Audrey Spinning Co., Weldon, N. C., was asked at this point to discuss the matter of long draft on cards. He said that "there is not a great deal to say. I used it on colored work up to 125 and 130, and we got very good results. It has its advantages in the combing effect that it gives, and it makes the lappers keep up when they otherwise wouldn't. We are carding mighty heavy for 30s, 155 pounds in ten hours. We have to card that much in order to get it through, and heavied up on the lappers. We find that with this long draft we are getting very good results. We are using 7/8- to 1-inch cotton mostly 7/8-inch.

This concluded the carding discussion, and the meeting turned to the consideration of the questions on spinning which had been prepared by the chairman and his committee. The first one asked, "What effect does long break draft have on spinning, breaking strength and variation of numbers?"

Long Break Drafts in Spinning.

Mr. Hilton was called upon, and after explaining that "what you call break draft I do not call it," said that he had found that from 1.07 to 1.21 between the back and second rolls gives the best results in breaking strength. He said he went on up to 1.72, but after passing 1.21 the strength began dropping and the unevenness began.

"I find using two teeth difference is best," declared C. C. Prince, overseer spinning, Borden Mfg. Co. "With three teeth we get a thin place and the roving runs out to one side using the weighted middle roll." C. H. Lawson, of the Patterson Mills Co., Roanoke Rapids, said he had tried four teeth difference and found the yarn was more "hairy".

Using Cleaning Hands on Spinning.

An interesting discussion occurred on the next question: "What experience, if any, have you had in furnishing cleaners for the spinning room, reducing the price per side enough to take care of this expense?"—in other words, providing additional cleaning hands in the spinning room similar to battery hands in the weave room, taking this

unskilled and routine work off of the spinners.

One man whose name was not secured said he had tried it about eight or ten years ago and didn't find it was successful; he'd rather have his spinners do their own cleaning.

"I have never tried it," said Mr. Prince, "but it appears to me if you get the spinners' wages down, there are times in the day when you find the spinner can do her own cleaning, and if you put her on more sides, there are times in the day when it runs worse than others and it would make it harder for her to keep up. I would say let the spinners do their own cleaning."

J. T. Garner, of Rosemary Mill No. 3, said he uses regular roll pickers, and finds this practice very satisfactory. However, he said, he thinks the spinner ought to do her own creel cleaning and other cleaning work except the picking of the rolls.

"I have never had any experience on this new proposition," said Mr. Moore of Edenton. "Still I believe it will work where a man knows his help and knows the disposition of each one, so to speak—I believe he could work it to advantage. You will find some spinners who are not any good at cleaning; you will find some spinners it is hard to make keep the frames clean, and you will find some hands who are not such good spinners but who are good at keeping the job clean. If the help could be segregated or allocated according to their best abilities, putting certain ones in the place where they are good and like it, I believe you would find it to be easier. It is a very hard thing to keep a spinning room clean. It is practically impossible to make good yarn and get a good production unless it is clean, and I believe if we could do this, if we have the help in hand, it would be a success."

"I don't see why it isn't the same as having battery fillers on looms," declared Mr. Mullen, "so why not use a roll picker. We have roll pickers in all three of our spinning rooms. We did not, however, reduce the spinners' wages. We were allowed by this to give them more sides. The only thing I see is that it would put more work on the overseer. I do not see why it isn't along the idea of keeping the skilled and trained operatives to do the work that requires skill and training. Another thing: it is a good place to train spinners. A good roll picker with ambition will not stay a roll picker all the time. We have worked it out successfully, but I know that it has taken more attention from the overseer and second hands to keep them on the job all of the time."

Mr. Black explained that in his mind the biggest trouble with the system was that the spinner was trained to keep up her sides without cleaning, and then when a shortage of help might come it would be difficult to get spinners who could handle a job satisfactorily.

"I worked at a mill once where they had roll pickers because it was necessary for them to be particular with the work, and they wouldn't allow the spinner to put up an end with greasy fingers," said J. E. McAlister. "That is an advantage."

"I find that a good spinner, when she is spinning, and an end comes down, she looks at that and finds the cause," said Mr. Prince. "If you put a cleaner on it looks to me like she would let things like that go by."

"I wonder if we could put that in practice to develop a better class of spinners," said Mr. Lanier," and instead of putting our beginners to spinning and making a lot of bad work, make cleaners out of them. It would give them an idea of the importance of keeping things clean. You know, the human element does more damage in the mill than broken gears. We might leave them there until they became familiar with things and learned the importance of making clean work and keeping the creels free from dirt and oil. You know, sometimes we have spinners we keep for two and three years who do not take any pains about putting up an end. I believe we could raise up a better class of spinners than we have today if we have cleaners and spinners in the same room."

Mr. Black expressed pleasure at the evidence that the members were giving consideration to matters of this kind, and said he believed it would be a good system if it would be worked out so as not to increase the cost of spinning. He said he had a spinner ask him the other day about some system of vacuum cleaning for the spinning, and added that he had been in a mill where the spinners were not touching the rolls but were using a device something like an egg-beater for taking the lint off of them.

Norman B. Hill, Secretary and Treasurer of the Eastern North Carolina Division.

J. F. Allen, overseer of spinning, Caswell Cotton Mills, Kinston, N. C., said that he does not allow the girls to pick their rolls when doing spinning. In his opinion, a great deal of the trouble is in the overseers falling down in their example and teaching when it comes to keeping things clean around the room. He said he did not believe in the practice of spare hands around the room.

Mr. Black explained that the system of having cleaning hands could hardly be interpreted as using spare hands, since each group has its own defined duties to follow.

An Ideal Spinning Room.

"Some day," said Mr. Gilbert, "a man is going to visualize a spinning room, and it is going to be a spinning room in which the ends run about the same all day. It is just a matter of temperature and humidity. That man will have the spinning room running without running bad at times during the day. The spinners will run twice the number of sides and make half again as much money. It takes too long now to train a spinner and in my opinion it is on account of the system of training them. You can make a Jacquard weaver as quickly as you do a spinner now—and he makes three times as much money. You can take a spinner and put her on a set of sides with

somebody who knows what spinning means and make a spinner in two weeks to a month; but you can put her with Sadie Jones and they will get to talking and killing time and it will take her twelve months. The responsibility rests with us, who are afraid to put into effect something new to see whether it will work or not. There isn't a great deal of money set aside for experiment in the average cotton mill. But that spinning room some man will run some day, and you fellows might just as well work toward it. It is going to be a spinning room where there are very few ends down, and the cost will be down and the production will be of a better quality."

Causes of Uneven Yarn.

Passing from this the chairman presented the next question: "What one thing on spinning frames in your opinion will cause the greatest amount of uneven yarn?"

"I find that rolls worn causes a lot of uneven work; not enough twist in the roving, pulling across the roving rod, crooked steel rolls, slack bands—these will cause it," said Mr. Prince.

Mr. Black explained the purpose of the question was to draw out what would be the biggest cause, and asked Mr. Prince, if he had some uneven yarn come through, what would be the very first thing he would look for.

"I would look for slack bands before anything else," replied Mr. Prince.

Mr. Knight said that assuming the roving was coming through all right, his suggestion would be the roving traverse. A. G. Smith, overseer of spinning, Rocky Mount Mills, Rocky Mount, N. C., said he had found the intermediate gear between the rolls to be a major cause of uneven work. Another cause, he said, is in the spindles, in the section man setting the spindle just anywhere.

Uneven mixing of waste was given by J. O. Creech as the biggest cause at his plant. "Also, we have some 22- and 23-year-old frames where our twist gear causes us trouble," said Mr. Creech. "We are running a 24 twist gear, very small." Mr. Creech is overseer of spinning at the Mobile Cotton Mills, Selma, N. C.

Uneven roving was given as a cause by G. C. Sutton of Edenton, but Mr. Black explained that the assumption was perfect roving from the card room; "after this morning's discussion on carding they are supposed to be giving us perfect work," he said.

At this point Mr. Clark called attention to the Arkwright test of O. G. Murphy, which showed varying percentages of inch cotton in bales from different sections of the country. This has been commented upon in previous meetings. Mr. Clark referred to it to show that there is a wide variation in the amount of full staple actually contained in a bale bought for any certain length, and he believed that this was a big contributing cause of uneven yarn. In his opinion. "the day is coming when cotton will be bought on the percentage of any given length of fiber contained in a bale."

"Hasten the day," said the chairman, relating an experience of his with a cotton man who, in endeavoring to find some inch staple in a bale, had thrown away handsful, finally finding some which measured an inch. But, Mr. Black said he told him, "I've got to run that you threw on the floor just like I have that."

The next question was, "What causes yarn to break worse at some particular place on the traverse, for instance when ends break when the traverse is at the bottom, and the consensus of opinion reflected in the answers was that it was the use of the incorrect weight of traveler which would cause end breakage at the bottom when building up.

Spinning Room Humidities.

"What is the best relative humidity to carry in a spinning room?", was next asked. The chairman called on Mr. Knight of Rocky Mount.

"We try to keep it at 65 per cent relative humidity," said Mr. Knight. "We have I think 27 stations in our mill, and the second hands take the reading twice a day. In addition to that we have another instrument which is screwed onto a light bulb socket that keeps a record of the humidity. We try not to let it go below 65 per cent, and in the card room and around the drawing we do not run that much. In the twisting we run 70 to 75, and in our winding room we get just as much as we can, and then we put it in a conditioning room and see what we can do for it in there!"

N. B. Hill, superintendent of the Caswell Cotton Mills, Kinston, N. C., was called upon and said that "after we started up we had the humidifiers set to run from 60 to 65 in the spinning and winding, and from 50 to 55 in the card room. So far we have had very good results."

Mr. Moore of Edenton was asked to explain a system of cooling he has for his spinning room in the summer time. "We have a big Sturtevant fan, and made a tunnel out from the mill about 40 feet. This air comes under the ground, and we have a lot of pipes with cold water circulating through them, and the air comes by these pipes and then through a long pipe into the spinning room. This pipe starts off about 18 inches and decreases gradually until it is about three inches, and the air comes out about every six or eight feet on each side of the pipe the length of the room. There is a humidifier in this tunnel coming over. That cools the spinning room. We think it is worth a great deal. We use it in the summer time. We think it takes off at least ten degrees on a hot day. It displaces the hot air with the cool air."

A question as to what is meant by a certain percentage of regain at certain relative humidities was explained by Professor T. R. Hart, who pointed out that it is based on the bone-dry weight of the cotton. In other words, he explained, "if you put cotton in an oven and dried it bone-dry and it weighed 100 pounds in this condition, and you subjected it to an atmosphere in which it would gain enough in absorbed moisture to make it weigh 107 pounds, you would say the regain was 7 per cent."

Weak Places in Yarn.

The last question from the questionnaire was "What is the cause of weak places 1/2-inch to 2 inches long in yarn as it comes from the spinning frame?"

"I feel like the waste has something to do with that at times," said Mr. Knight, "but where you have been running steel rolls for a good many years I think that is the greatest evil—when the flutes become worn. We have some new frames and some old ones, and I find that on the frames where the steel rolls are old we have more of this trouble."

Mr. Lanier said he has this trouble and would like to see it cleared up. It is especially expensive in making ply yarns, he said, where one of these places causes a singling that often is not caught until it has done a whole lot of damage. He wondered if it was not sometimes in his cotton, because he said that his waste is mixed back in the

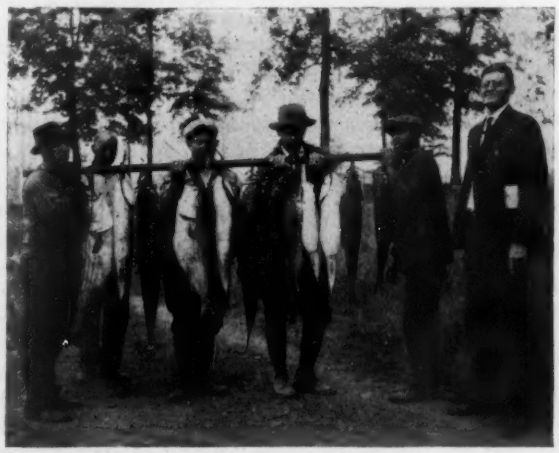
same way at all times; and this trouble occurs every now and then. "I know that at times we have these thick looking places but there is no twist in them, and on a 4 x 6 spool it is not strong enough to pull itself."

Mr. Hilton expressed the belief that a great portion of the blame for this trouble lies in the cotton.

Re-Working Card Strips.

At this point, Mr. Clark brought up the question of re-working card strips, stating that a prominent mill man had recently made the statement that it is costing the southern mills a million dollars a year to re-work strips. He said that in spite of what the mills try to make themselves believe, the strips reduce the breaking strength at least five per cent. He explained that it was simply a mathematical proposition to figure out, without using the strips, a lower grade of cotton which would be entirely satisfactory, cheaper, and give the required breaking strength. Mr. Hilton verified the opinion as to breaking strength, declaring he had made tests proving that the re-worked strips decrease the strength from five to twelve per cent.

In connection with this subject, the question was asked, "Does any man really know he is getting any strips through



What the Committee Provided for Entertainment Purposes. A Glance at the Group Picture on Page 773 Will Show that No Fish are Visible

to the fly frames?" J. E. McAlister said he knew that once he was putting in 25 per cent strips on the finisher aprons and had to heavy up 25 per cent on his drawing.

"I had a similar experience running linters," said Mr. Black.

"I wouldn't say we ever got any strips, but I do know we have had a lot of trash coming through," declared Mr. Moore.

Laps on Middle Steel Roll.

The chairman next asked, "What causes an excessive amount of laps on the middle steel roll?" This was not discussed by anyone except Mr. Allen, who said in his opinion "it is in the staple of the cotton; in trying to make too fine a number out of the cotton being used.

Mr. Crouch did add that lengthening the break draft from one to two and then three teeth difference practically stopped this trouble.

Reverting back to the question of flats loading up, Mr. Vick offered the further suggestion that this could be caused by the bowing of the top of the back plate.

The discussion was ended at this point, and the delegates repaired to barbecue grounds, where a palatable barbecue and "rock fish muddle" was served, the mills at Rosemary and Roanoke Rapids being the hosts. Following the luncheon, T. W. Mullen was elected chairman to succeed Mr. Black. It was voted to hold the next meeting in the early part of October at the Textile School of North Carolina A. & E. College at Raleigh. There being no further session, the afternoon was spent in visiting the several mills at Rosemary and Roanoke Rapids.

Weaving Division Meets at Spartanburg.

(*Continued from page 772.*)

lowest, .1 per cent; average, 1.17 per cent.

Between 20 and 40 yards: Highest, 5.21 per cent; lowest, .3 per cent; average, 1.02 per cent.

Between 30 and 40 yards: Highest, 1.32 per cent; lowest, .02 per cent; average, .39 per cent.

These figures, the chairman said, were based on the total production of the mill.

Mr. Brown said the following question had been asked: "Does anyone use corn starch with no compound for sizing?" He presented it to the meeting, but beyond one man's saying he had tried it unsuccessfully one day, there was no discussion.

The final question presented by Mr. Brown also was not discussed. It was, "Is it possible to make a tape selvage on a three-harness piece of goods without a tape motion?" If any of COTTON'S readers can answer either of these questions, the columns of the "How Other Men Manage" are open for their discussions.

This question concluded the meeting. The summer meeting of the Southern Textile Association, to be held at Kenilworth Inn, Asheville, N. C., on June 17th and 18th, was announced, and Secretary Gregg urged members to write direct to the hotel for accommodations, stating that the reservations were desired for this convention, since special rates would be in effect for delegates to it.

At the morning session, Horace H. Willis announced that under the auspices of the government, a four-weeks class in cotton grading would begin at Clemson College on June 13th, to be followed by a two-weeks intensive course in cotton testing. He urged mills to send any men interested to these courses. Detailed information is available from Mr. Willis, at Clemson College, S. C.

A Tale of Yesterday, Today and Tomorrow.

Such is the title of an interesting and handsomly prepared booklet from the pen of Floyd W. Parsons, written on the occasion of the 100th Anniversary of the Joseph Dixon Crucible Company of Jersey City, N. J. It is a recital of business history, setting forth the business philosophy that has brought the Dixon Company through a hundred years of meritorious service, and told in the manner that only Floyd Parsons can tell it. It contains much that will stimulate the imagination and aid the reader in assuring longevity for his own business. Every executive will appreciate it and read it thoughtfully.

Move General Office to Boston.

Saco-Lowell Shops announce that their general offices have been removed from Newton Upper Falls, Mass., to 147 Milk Street, Boston, Mass. This includes the executive offices, northern sales and foreign sales departments.

Social, Religious and Educational Conditions In Textile Mill Villages*

By WILLIAM D. ANDERSON.†

The "Appeal to Industrial Leaders of the South," recently issued from Washington by Bishop James Cannon, Jr., and signed by forty-one southern bishops and ministers, brings forcibly to our attention certain conditions confronting the textile industry of Georgia and of the whole South, which might be profitably considered by this meeting of men who represent the management of the leading cotton mills of the State.

If time premitted, it would be interesting to call attention to the rapid industrial development of Georgia, and of the whole Southeast, that has taken place during the last quarter of a century. While other lines of manufacture have not been neglected, it is safe to say that the greatest development has occurred in the textile industry, and as we here are more directly interested in textiles, I shall confine myself largely to a discussion of some matters pertaining to our own industry, which are called to mind by the publication of this "Appeal." Indeed, I think it conservative to say that the signers of this so-called "Appeal" had the textile industry in mind, almost to the exclusion of everything else.

While I am talking to Georgians, and while what I shall say is spoken specifically to members of our Association, the conditions I shall discuss are general in their application to the whole South.

Until recently we have been a distinctly agricultural people. While historians tell us that in the early Colonial days we had an industrial development here that was no mean thing, as compared with New England, the remains of such were negligible after the storm and smoke of the Civil War had cleared away. With little left but our lands, there was not much we could do except to attempt to retrieve our fallen fortunes by addressing ourselves to agriculture, since that called for the minimum of capital and the maximum of physical effort.

While our progress toward anything that approached wealth was necessarily slow, I maintain that we gave a good account of ourselves and, on the whole, have but little to regret.

As soon as the state of our finances would permit we began an industrial development and our progress has been enviable from the standpoint of both the rapidity of development and of success. For a long time we were forced to rely largely on our own resources, as other sections of the country entertained a rather poor opinion of us and were little disposed to make investments in the South. As the bitterness and heat of conflict died away, and as the more enterprising capitalists of other sections came to know us better and to realize the rare opportunities offered by our section, this condition began to change and today there is a heavy investment of outside capital to be found in southern enterprises, and particularly in southern cotton mills.

That Georgia and the whole Southeast is destined to have a great development take place is a fact that is now recognized by students and business men everywhere. This development will be both agricultural and industrial. And in this fact is found our greatest asset. There are few sections of the United States so favored as we are in the possibility of an agricultural and industrial development going forward simultaneously, hand in hand. Such a condition has always been impossible, for instance, in New England. Nor is it feasible in many other sections of our great country. But here conditions are ideal. Our climate, the varied character and rare productivity of our soils, a generous supply of hydro-electric power, our ample transportation facilities by rail and water, our homogeneous population, are all factors that can hardly be equaled anywhere else.

We are not alone in recognizing these elements that insure us of a great future, but men everywhere have awkened to the facts and I do not think it any exaggeration to say that the eyes of the whole country are today turned toward the Southeast, nor do I think it a wild prediction to say that we shall probably have here, during the next 25 years, the greatest development that has ever occurred in any section of our country, in a like length of time.

That great wealth is to come to us as a section, is certain and sure, since money has always been the measure of and partner of success. I cannot think that any one would be disposed to offer objection to the possibility of success. I cannot think that any one would be disposed to offer objection to the possibility of success and wealth coming to this section, because, I believe that we can safely assume that we will use both wisely. Certainly, I know of no part of the country so much in need of things which wealth alone can bring as is our section. We are deficient in educational facilities of every kind. We are in great need of better roads, our country friends are entitled to better and more comfortable homes and better facilities for the development of their social life, and better churches. Money alone can bring these things. Other sections of the country are ahead of us in these matters, because they have had more money.

This prosperity, which I believe is assured, will be participated in by every one. New industries and new mills will add to the wealth of any community in which they are located. The farming class particularly will greatly profit by the industrial development that is ahead of us. In Georgia today we have too many farmers in proportion to the number of city dwellers. I think we have in Georgia, roughly speaking, three people in the country farming and raising products of the soil for every one person in the city to consume these products. The natural result of this is that the farmer has been forced to grow something that could be shipped away to a distance, something for which there was a foreign market, and hence our attention to the production of cotton, an article we can ship to the uttermost parts of the world.

For my part, I believe that growing cotton has been the greatest contributing factor to keeping the South poor.

*An address before the Cotton Manufacturers Association of Georgia.

†President and Chairman of the Board of Bibb Manufacturing Company.

With the coming of an industrial development here, these conditions will be changed. The proportion of farmers and city dwellers, who are the consumers of farm products, will be better balanced and the farmer will be given an opportunity to grow products for the growing of which our Georgia soil is equally as well adapted as for growing cotton, and he will have a ready cash market for these products practically at his door, without spending a large proportion of its market value in paying transportation, this cash market being afforded by a happy, contented, well employed industrial population.

As I said before, capitalists and business men are turning envious eyes toward the opportunities offered by our section, and so marked is the belief of those living in other parts of the country in the value of what we have to offer that many concerns are moving their plants bodily to the South, or else are establishing branch plants in the South. Those who are not doing this are wishing that they could do it. In fact, the South has just been discovered and they are coming from all sections to exploit its advantages. In the textile industry the movement from New England to the South has developed into a hysteria.

All of these things conspire to create conditions which we who have plants here and expect to stay here and hope to grow here, must take fully into account.

I could take up all the time you are willing to give me in discussing many things about which we must concern ourselves, but will hasten to point out a situation that is likely to be accentuated by the "Appeal" of our church friends. I refer to the labor situation. We have here in the South the best type of labor to be found anywhere in the United States. Those who are associated with us in the actual operation of our mills, our operatives, if you choose to use the term, although I do not like it, are the best to be found anywhere in the textile industry. This, of course, comes from the fact that they are all native Anglo-Saxon people, of the best blood, and a pure strain of it, and are in sympathy with the best ideals of our section and of the best ideals of our industry. That our mill workers are ready at all times to cooperate with the management in improving goods, in improving efficiency in the operation of the mills, and in improving the social and religious conditions of the community, is something about which I can testify of my own knowledge. They are ready to go just as far in these matters as we are ready to go, and take just as much pride in accomplishment.

However, if we are to have the industrial development I believe we are going to have in the way of new plants which we ourselves shall erect here in the South, in the way of industries which will be promoted by capitalists from the outside, and in the way of the movement of mills from New England to the South, there will come a time when the supply of labor will be exhausted. The time is not far off when the mill that offers the most to the people who work in it will enjoy the best supply of labor and the best quality of labor. I do not refer to the matter of the wage scale, for that is something that takes care of itself. Wages will always be leveled to the highest scale of pay that is possible for the industry. I refer to more important things than the pay envelope. I could be selfish and say to myself that, believing the statement I have just made to be true, it would be smart to say nothing about it but quietly go about preparing for the situation I speak of and be ahead of those with whom we shall compete on these points.

The trouble is, however, that if there are any in our midst who are short-sighted in this respect and decline to exercise themselves to bring about an improvement of the conditions under which their employees work and live, such mills become foci of danger and trouble. A little blaze kindled in an unnoticed corner may prove to be a conflagration that will burn the best type of construction.

I am satisfied that a very large percentage of our mills are already seriously at work on this problem and many of you have been at it with a serious purpose for a long time. A great deal has been accomplished. I make bold to say that taking our industry as a whole, the workers do their tasks under as favorable shop conditions as are to be found anywhere in the world. I believe most of you are constantly studying to improve these conditions. I believe that, taken as a whole, our workers live in better homes and enjoy more of the conveniences of modern civilization than any set of workers to be found in any other industry. On the whole, the religious, educational, and social conditions in our mill villages are superior to those found either in the rural districts or in the congested sections of cities that are usually inhabited by the working class. I know that many of you have spent large sums of money in connection with these matters and that you have annual budgets covering these features that run into the thousands of dollars.

It is common knowledge that no mill would think of erecting houses for its worker today unless those houses were equipped with electric lights, sanitary sewerage, bath rooms, and other modern conveniences.

Most of the large villages have well equipped school buildings and in many cases their schools are superior to the schools of the cities near them.

It is the rule either to erect wholly at the expense of the mill or to contribute largely to the erection of church buildings, and it is the practice of some to assist in the operating expenses of these churches.

It is a common practice with many mills to have competent physicians in their employ whose services are at the disposal of the workers, either without charge or at a very nominal charge.

Medical clinics are maintained in many villages where minor hurts and accidents occuring to the village population are attended to without charge.

Many mills employ professional nurses whose services are at the disposal of those who live in the village, with courses in home sanitation and care of children.

Cooking schools, domestic science classes of all kinds, including dressmaking, millinery, etc., are not unusual facilities offered to the ladies and girls of mill communities, without charge.

Socal workers are a common adjunct to a mill village today and as a result there is a healthy social life developed under their leadership. We have so many different kinds of clubs in our mill village that I cannot keep up with their number or their activities.

Many mills employ athletic directors who organize and direct the athletics of the community, with as much care as is given to this work in the colleges.

Nothing but praise is to be said for all who have made progress in the matters I have enumerated. I think, however, that we can all do better than we have done and that we should strive to improve on what has already been

accomplished.

It is probably true that in some localities little progress has been made by the mill management in these matters and I believe that we should concern ourselves about this in an effort to try and secure their cooperation in doing as much as the situation will permit. I believe that many mill managers who have not engaged in a constructive program of this kind would welcome the assistance of those of us who have had some experience in it, and would like to have the benefit of our experiences.

I do not know anything better that this Association could do than to give consideration to the employment of a skilled man to go about amongst our members and foster the development of activities such as I have enumerated, in every mill village in the State.

I offer this as a suggestion to the Association and I believe that if we could get the right man, his cost to us would be the best money we could possibly spend.

I spoke a while ago of a growth in the wealth of our section. I touched upon the advantages which we who are engaged in the textile industry will have by reason of our favored location. We have all been going through a hard struggle to keep our heads above water, but I believe that the textile industry is a good business and that we shall average well in point of returns on our investment over the next twenty-five years, for I believe that we shall participate in the general prosperity that is to come to the people of the United States.

We must not overlook the fact that these opportunities for a better business, better earnings, better returns for our efforts, carry with them increased responsibilities. We should see to it that those associated with us in the conduct of the business profit as we profit, and as our situation improves we should exercise ourselves to see that their lot in life is improved. Our workers are our friends and we should show them true friendship at all times. And as the years go by we should grow into closer contact and relation with those who work with us.

After all, there is something better in this life than merely to make money. I believe that all of you will agree with me. To make money, of course, is necessary if capital is to be interested in industry, and, as I said before, the making of money is the measure of success in business. But for those of us who are charged with the responsibility of operating the cotton mills here in Georgia, there is going to be an enlarged opportunity for us to do bigger and better things than to make money. To do things that will bring more joy and satisfaction, without which, the making of money will be as an apple of Sodom.

The big thing is to do our job well. We must make our section and our State a better land. We must make our community a fairer place in which to live. We must see to it that all who are associated with us in our business have a better home life, that they have healthier children, that these children have an opportunity to grow into finer and more useful men and women than their parents have been, and that all of them are content in their work and are proud of their association with the Company they are serving.

Some have argued that the fall of man brought the curse of labor on the world. If that had been the only thing that resulted from the fall, I would give a vote of thanks to Father Adam for his performance. For myself, I know of no greater joy than the opportunity to work, and I believe I speak for the average man in saying this.

The fatal result of the fall was the introduction of sin into the world, not work.

I would say no unkind word of Bishop Cannon and the forty-one bishops and ministers who signed the so-called "Appeal". I really think, however, that a better name for it would be "Attack". Nor do I care to undertake any extended answer to what they have said. It almost answers itself. Anyway, "the jury sits each day", as a contributor to the Charlotte News and Observer so aptly says, and I, for one, am not afraid of the verdict. I do sorrow at their lack of tact and I regret their ignorance of what they are talking about. I am sorely afraid that they have been imposed upon by sinister influences. I am afraid that the forces back of this proposition are those that are opposed to all that has made this nation great and are seeking to tear down those principles we all hold dear.

We need the help of our Bishops and church leaders and need it badly, but not at the point where they are seeking to inject themselves. They are tampering with dangerous tools and are unfitted to handle the matters they are discussing, because of their lack of information, training, and experience.

I said a while ago something about the curse of sin in the world. It is at this point that Bishop Cannon and his associates can help us. Neither our section of the country nor our particular industry stands in need of any new social uplifters.

What we need most today is a genuine revival of religion, and in making this statement I am but echoing what other and better business men have said and am but voicing the unspoken thought of most men in business. As never before, we need preachers in the pulpit who will preach a gospel that will save men and women. In common with most of you, I hunger to hear this gospel preached, and I assert that if those of us in business can get the spirit of The Master in our hearts, we can be depended upon to solve all of the perplexing problems to which our friends called attention in their "Appeal." Under such conditions, I believe it would be safe to leave their solution in our more experienced hands. I am sure we want all these problems solved just as badly as any one can possibly want it done.

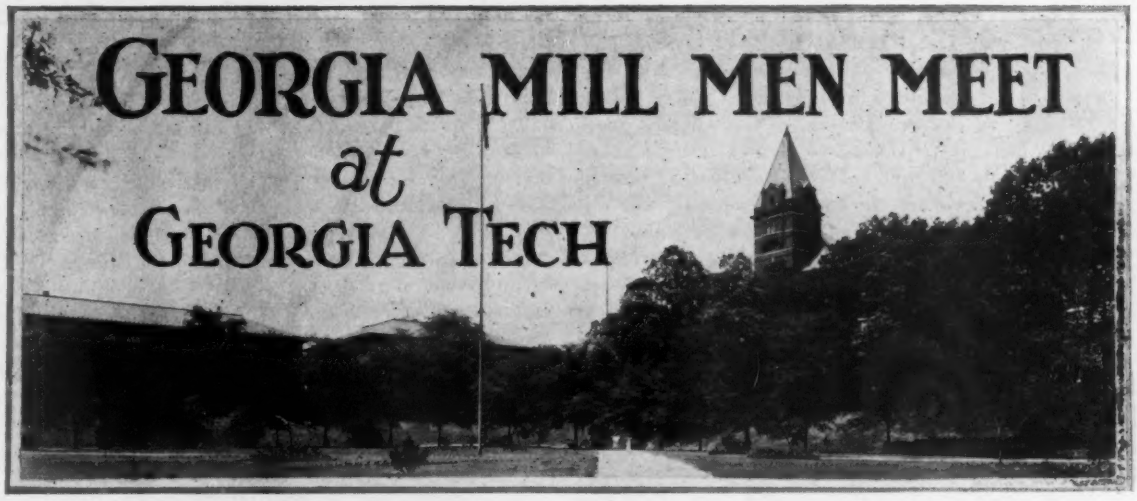
You may be tempted to anger and hasty retort, as I was, but I believe it would be a mistake for us to let any such feelings turn us aside from the discharge of the duties and responsibilities of our positions. I feel sure that we can count on the support and cooperation of the rank and file of the ministers in all the churches of the South, and of a large proportion of the church leaders. I believe that we are in the house of our friends.

I hope, therefore, that we will make up our minds individually, and as an Association, to go back home and put our best thought and our best efforts into the task of meeting bravely and wisely the many complicated issues that will be presented to us during the next few years.

Move Into New Offices.

The Hinde & Dauch Paper Company, Sandusky, Ohio, are now occupying their new general and departmental offices in their new fireproof administration building at Adams and Decatur Streets. This company, it is stated, are the world's largest producers of corrugated fiber shipping boxes and packaging materials.

GEORGIA MILL MEN MEET at GEORGIA TECH



A constructive convention was held by the Cotton Manufacturers' Association of Georgia on Tuesday, April 19th. Coordination of effort and work between the mills of the State, and the State's textile school, was the major theme. To this end, the convention itself was held at the Georgia School of Technology, in Atlanta, of which the A. French Textile School is a part, and the program emphazied the thought by giving prominence to a discussion of means by which the service of the school to the mills, in furnishing properly trained men, could be improved. Several recent graduates of the school, now occupying positions in the industry, discussed the needs of the school from viewpoints seasoned by actual contact and experience in the industry following graduation, and President George S. Harris presented some interesting observations on the subject of the relationship of the school to the mill. The contact thus made between the school and the mill executives undoubtedly will redound to the industry's benefit through a more definite interest in the school on the part of the mills.

The other main feature of the convention was an able address by William D. Anderson, chairman of the board of directors and president of the Bibb Manufacturing Company, Macon, Ga., on the subject, "Social, Religious and Educational Conditions in Textile Mill Villages." This address is reproduced in another part of this issue of COTTON.

W. H. Hightower, president of the Thomaston Cotton Mills, Thomaston, Ga., was elected president of the Association succeeding George S. Harris, who has held the position for three years. J. J. Scott, of the Scottdale Mills, was made treasurer. The following men were elected as directors: W. D. Anderson, of Macon; Clifford J. Swift, Columbus; D. A. Jewell, Jr., Chickamauga; S. A. Fortson, Augusta; L. L. Jones, Canton; D. W. Anderson New Holland; Norman E. Elsas, Atlanta; Robert White, Athens; Paul K. McKinney, Columbus; M. M. Bryan, Jr., Jefferson; and John A. Cheatham, Griffin.

Theodore M. Forbes, who on January 1st succeeded W. M. McLaurine as secretary of the Association, was introduced formally to the membership at this meeting. Hatton Lovejoy, of LaGrange, was named as attorney for the association.

Following an informal discussion meeting on the previous evening, the Association assembled on Tuesday morning, April 19th, in the Chemistry Building of Georgia Tech for its only business session. Dr. L. R. Christie was called upon for the invocation.

Hibbard S. Busby, director of the textile school, in a few well selected words, explained the desires at the school toward helping the mills, and J. A. Miller, of Atco, responded. Mr. Forbes, the new secretary, was next introduced, and made his report, which was followed by the reports of the traffic manager and treasurer. The resolustions committee submitted resolutions, which were adopted, expressing regret at the illness of Former President Lee Jordan; one of congratulation to Mr. McLaurine; and one asking for more aid for the State Department of Commerce and Labor toward the proper enforcement and functioning of the Child Labor Law. Mr. Anderson's address was the next feature, and as stated, this will be found upon another page.

Mr. Harris then read the annual report of the president, covering the matter of the Cotton-Textile Institute, in the formation of which he was closely allied with other leaders; the matter of cotton; and concluded with an interesting discussion of the place of the textile school in the life of the industry. His remarks follow in part:

Annual Report of the President.

"This organization has a very definite place in our economic life and I hope that our membership as a whole will give it more attention. To have merely your financial support is insufficient. It is necessary that you think in terms of the industry as you approach many questions of very serious importance. To my mind, we are in the kindergarten of cooperation, and I will feel quite satisfied if we really learn all of our lessons and reach graduation within ten years. This might seem a long way off, but keep in mind that we are merely custodians, for the time being, and when we pass the Mills of Georgia over to the younger men now coming on, we must be able to look back with pride when we then compare the present with the past.

"Competition—that great grind-stone for sharpening wits—can very quickly become a machine of destruction if permitted to dominate your movements. We have all the machinery necessary to direct our competitive forces, but this machinery can easily be rendered useless through your lack of interest.

COTTON-TEXTILE INSTITUTE.

"The past year has given birth to a new organization, which, to my mind, is destined to eventually wield a power beyond the imaginations of any of us today. Just two years ago Lee Rodman came to the New Orleans meeting of the American Association with a new thought which very greatly appealed to me. It was discussed informally among a few who seemed to see its possibilities but the seed fell on unprepared soil and could not germinate. A year later, it was my privilege to introduce a resolution at the Atlanta meeting, outlining my own ideas, which replanted the little seed that Mr. Rodman brought to New Orleans, but at that time, the continuation of unsound conditions had prepared the soil, and the seed very quickly took root.

"It has been most gratifying to see how quickly this little seedling has grown into a tree that will continue to grow until it spreads its sheltering boughs over the entire industry we proudly call our own. I have reference to The Cotton-Textile Institute. It would be repeating what is now common knowledge to review the progress in our organization as we moved step by step from one meeting to another, starting with the first in the Atlanta Biltmore Hotel, on up to date. Suffice it to say that a real work has been done first by a small group, which was increased as the movement traveled north until we had the support of mill executives directing seventy-five per cent of the cotton spindles of America.

"It is an interesting story to relate the work of the Executive Committee as these men moved to build the foundation, adopt policies, and finally select our President and his staff. Had we consumed years instead of weeks in finding a President, we could not have selected the peer of Mr. Walker D. Hines, and we are to be congratulated that he has been willing to take the responsibilities that now rest upon his shoulders. We are equally as fortunate in having so able a man as George Sloan to support Mr. Hines as his chief assistant. With these men, supported by a well-selected staff, we now have in action at 320 Broadway a machine that will be felt in cotton textiles from Maine to Texas. To appreciate this, you should call at the Institute offices while in New York and see for yourself just what you have created.

"To those men who have held out, we hold no animosity. We realize that they have acted on their own best judgment. We tried to prove the obvious value of the Institute and believe that as the group organization progresses, they will quickly see the wisdom of enrolling. No man long continues to reap the benefit of another's effort before he feels the urge to contribute his part. This is human nature. Many doubted, and probably some doubt yet, that manufacturers can or will play fairly. We have been an industry of individualists and to a degree should remain so, but there is a code of ethics applicable to cotton manufacturers, and this we expect to learn. With a great mind such as that of Mr. Hines to lead, we are sure of success.

"The Cotton-Textile Institute is here to stay. It is now serving the industry in many ways, but when functioning fully, will be of tremendous value to all branches of cotton, from and including producer to consumer. This will surely include all manufacturers, whether they are contributing members or not. On the other hand, we hope that eventually, every one in the industry will throw his strength, both moral as well as financial, behind the Institute to the end that it may be pushed forward to a glorious success.

"It may appear to many that insufficient progress has been made and I take this opportunity to plead for patience on the part of those who can not be fully informed as to the enormous task we have cut out for ourselves. Starting from zero a year ago, we have actually made much more progress than we could have reasonably expected in May, 1926. The greater part of the year was consumed in organization work which necessarily moved slowly. With no precedents to guide us, the Executive Committee moved cautiously in order to avoid as many mistakes as could be foreseen. This required frequent meetings of a sizeable group of busy men, some of which are charged with tremendous personal responsibilities, making attendance at these meetings difficult. Nevertheless, within the short space of a year, the Cotton-Textile Institute is a reality and is digging in as rapidly as conditions will perimt.

COTTON.

"We, as an important group of American citizens, as well as the consumers of a most important agricultural commodity, have been keenly interested in what has been generally termed the 'farm relief movement'. This was manifested by a very clear-cut resolution adopted by the American Cotton Manufacturers Association at the Atlanta meeting. On the other hand, it has been difficult for us to follow the very systematic thought and agitation started last year to artificially raise the price of cotton in this country above the world levels.

"The recent passage of the McNary-Haugen Bill by both House and Senate is to my mind very significant of the willingness of some of our representatives in Congress to cast aside the fundamental principles of sound economics in their excitement to 'relieve the farmer'. Utter disregard of the effect of this legislation on other departments of American life was evidently dominant in the minds of its supporters, and finally, just before passage, a successful effort was made by one of our Southern Senators to apply the 'equalization fee' to cotton in transportation, processing, or sale, other than the gin. In other words, the American price under this act, was intended to be artificially elevated above the world price, but the equalization cost was to be paid by the American consumer of cotton. When inventive genius produces some method of making water gravitate up hill, then, and not until then, will such a scheme stand up under actual test.

"It is gratifying to know that both of the Senators, as well as half of the Congressman from this State had the courage to vote against this measure, and that we had a man in the White House with the courage to kill it.

"We are, nevertheless, interested in the welfare of the American farmer, and especially the farmers of our State, and stand ready at all times to subscribe to any economically sound plan that may be proposed to improve his conditions. We can not subscribe to any plan based on the assumption that farming is greatly different from any other business, and submit that farming as a business will not be improved until more modern methods of merchandising are adopted. To artificially maintain prices is no more possible in farming than in manufacturing. In this connection, it was interesting to see the price of cotton advance on the day that the McNary-Haugen Bill was vetoed by the President.

"Personally, I can not express myself too strongly as

favoring the growth of cooperative marketing of cotton, and urge our members to support your 'cotton co-ops.' I believe through this route alone can we expect a more stable price and improved quality.

"During the year, our office has given some consideration to the problem of improving the quality of Georgia cotton, and this has also been brought to the attention of your directors. We are using in this State an increasing quantity each year of cotton, carrying cost of transportation from Texas common shipping points. The freight rate on such cotton to Atlanta territory is $1.29 per hundred. A car of Texas cotton can easily run 50,000 pounds, for which the transportation companies receive the staggering sum of $645.00 These rates appear to me to be enormous and

W. H. Hightower, Elected President.

should be very greatly reduced. My opinion is that freight rates on cotton, both long and short haul, are all entirely too high and out of line with other commodities.

"Furthermore, we should make every effort to improve the staple and character of cotton produced nearby and delivered to our mills by truck. In addition to encouraging and assisting the agricultural college in the work that institution is doing, we should see that certain fundamental improvements are made in the primary markets to the end that the farmer himself may receive the proper price differential to encourage him to cultivate for quality cotton and see that he is sufficiently penalized for undesirable cotton, for which, in many primary markets, he is now receiving approximately as much as for his better quality.

GEORGIA SCHOOL OF TECHNOLOGY.

"It has occurred to me that the mills of Georgia are not taking full advantage of the Textile Department of the Georgia School of Technology and I have made an effort this year to focus your attention on the school. In a survey made recently, I was agreeably surprised at the high percentage of textile graduates now at work in Georgia Mills, but there is yet room for very great improvement. It occurs to me to ask whether or not the mill executive is functioning in this matter as he should, and also, whether the school is doing its part, and with this in mind, we have brought you together and hope to bring out a complete discussion of elements of the problem.

"I have no criticism to make of the plant-trained men who are now generally in charge of our mill operations. These men have made good and have shown remarkable ability to meet the changing conditions. On the other hand, looking into the future, I can see the necessity of more knowledge of subjects beyond machine operation.

"During the past 25 years, we have traveled a long road, and as I look back and recall the mills of Georgia as a whole, when I started my apprenticeship, we can well say that we are proud of our progress. During that period, we have seen cotton manufacturing in the southern states grow from insignificant proportions to a place of leadership. On the other hand, I am now looking 25 years in the future, and wonder what the picture might be in 1950. Several departments of textiles appear now to have reached the 'saturation' point and mill executives are periodically finding it difficult to balance production with demand. As time goes on, this will probably become more of a problem, and I ask the question of you now; with our present facilities and system of training our future executives, will we be ready to meet the new conditions? I am not attempting to make the answer for you, but merely bringing it to you for consideration.

"From my observation, the average cotton mill executive in Georgia gives little thought to the school. Possibly, he receives applications from graduates from time to

Secretary Theodore M. Forbes

time, but if he takes one or more in his mill, does he know just how they should be handled? If the men are green and of little or no value, the mill executive feels no responsibility in the matter, and they often drift until discouraged and go into other lines of work, probably taking with them latent talent, partially trained, and sorely needed in textiles. The question before you is, are you as executives doing your part, and is the school giving to these men just the training required to enable them to take the mill positions?

"A Professor of the School of Commerce, New York University, has recently made some interesting observations from a seven-year study of graduates, involving more than 50,000 individuals. Among other interesting observations, he mentions that: 'Schools and colleges train young men and women for only about 15 per cent of the essentials of a job, and the problems involved in the supervision and personal development of men have been largely side-stepped by business executives.' My opinion is that he is cor-

rect in both of these statements. The schools are not entirely on the right track, and probably we, as executives, directing the affairs of the textile industry, today, and responsible for its future, are largely to blame. Quoting further the same authority: 'A man's worth above $30 or $40 a week is dependent on his ability to get favorable results from people. A man who has only technical knowledge to offer can be hired for a very modest figure, regardless of experience or training. But if a man has in addition to the specific knowledge of his work the ability to deal with people, his earning capacity and opportunities for service are almost limitless. The factors in personality are identical with the important factors of ability, personality being the result of the operation of these factors.' He sub-divides ability into the following traits: Impressiveness, initiative, thoroughness, observation, concentration, constructive imagination, decision, adaptability, leadership, organization ability, expression and knowledge.

"Investigations show such a glaring gap between training, and performance on the job, that colleges and universities are seeing that the greatest part of their responsibility lies in training the student in how to make use of the knowledge he has received when he gets out into life. Now, this student of human economics makes this final observation, to-wit: Even in a technical study, such as engineering, a man's success is due approximately 15 per cent to his technical knowledge of his particular field, and 85 per cent to those human qualities, and primarily, those qualities which have to do with successfully dealing with people.

"I submit these thoughts for the consideration of those of you connected with the direction of the school, and also those of us responsible for the training of our future textile mill executives. My thought is that colleges and univerities may have gotten out of balance, and if true, this is probably not so much the fault of the faculties as it is the men in business. The answer may lie in a better distribution of the student's time and efforts, with less devoted to that 15 per cent (which has been referred to), and more to the remaining 85 per cent. We often see men devoting the best part of their young manhood to the development of technical skill exclusively, which, in the final analysis, is a comparatively small part of the requisites to success. It is not infrequent for me to make contact with a man 22 or 23 years of age, who is a graduate, and thinks he is what he calls a 'textile engineer'. Yet, his actual contact with his life's work in a mill is from nothing, to possibly three or four months, made up of one or more short periods of summer work. Furthermore, we see men taking college training in work for which they are entirely unsuited, and this group retards the progress of the men who have correctly chosen their vocation. In some cases, these men are 25 years of age before they find that they lack some vital factor necessary to the success of a so-called textile engineer, whatever that is. I have seen such men and could not conscientiously advise them to start the long road that is obviously ahead of them. In such cases, there has been a waste of money and human effort, including the time and effort of the man himself. This group includes many able men, but with ability in lines far removed from cotton manufacturing. How much better would it be if such men could be directed early in life towards a line of endeavor for which they are naturally endowed! The growth of our industry in the South has attracted the attention of men in other lines who have placed their sons in textile schools without proper advice: These boys enter college and go blindly on up a road which they think leads to the coveted goal, with little or no knowledge of what is ahead of them after graduation.

"I believe it possible, by a closer cooperation of the mill and the school, to place the graduate in a better position to take his place in the mill, but I also believe that a large part of the responsibility for this lies with the men directing our mills today. I submit that it is not only to our interest now, but is our duty to make use of the school, to fully acquaint ourselves at all times with the school's requirements, and see that the equipment is not only adequate but modern in every respect. For the benefit of the mills today, as well as the students who are the executives of tomorrow, the school should be in position to do a great part of our research and testing work, and such work should be passed to the school as far as is possible.

"I do not believe that the cotton mills of Georgia can afford to stand by and see this Textile Department suffer for the want of adequate equipment, or the facilities necessary to instruct these young men in the most modern methods. My idea is that not only should the State funds be supplemented where necessary, but that we should interest ourselves at all times in the program or lack of progress made here, with the purpose of making this school a part of our mill operations.

"I hope that the subject matter presented by speakers this morning will be fully discussed and that this meeting may be the beginning of an awakened interest on the part of our cotton manufacturers. I wonder if we are not missing a good bet by our seeming indifference to what might be made the greatest asset within the State from the standpoint of the future of textiles in Georgia."

Following Mr. Harris' paper, four graduates of the textile department of Georgia Tech, discussed the subject of the school from the viewpoint of graduates who have been in the industry actively for varying periods since leaving school. These men were John A. Simmons, superintendent, Lanett Bleachery & Dye Works, Lanett, Ala.; Roland Broadhurst, of the Thomaston Mills; Lee Sens, of the Callaway Mills; and R. B. Newton, of the Bibb Manufacturing Co., Columbus, Ga.

Mr. Newton's remarks, brief and to the point, made definite recommendations as to profitable changes at the school. He said in part:

The Viewpoint of a Former Student.

"There is a goal in all lines of endeavor, the ideals of which are constantly changing with the changes in the demands of civilization. The system which is the ideal today is tomorrow obsolete, at least in some of its parts.

"Four years at college does not give anyone an education. It merely shows one how to get it. Education comes after finishing college and whether it is acquired or not will depend entirely upon the individual.

"A little of the practice in the various departments of a mill in actual operation is essential to the best training of a textile graduate for an executive position.

"To get immediately to the questions it is desired to discuss; how can the Georgia School of Technology be of maximum service to the Cotton Manufacturers of Georgia, and the South?: and from a former student's standpoint, what changes in the present prescribed course of study would better prepare a graduate for the duties of a cotton

(Continued on page 796.)

The Effect of Increased Air Movement in a Humid Weaving Shed

BY W. HAMILTON GORDON

Eighteen months or so back the British Government appointed a committee to enquire what modification in the existing regulations governing the artificial humidification of cotton weaving factories were desirable and practicable, it being evident that the physical conditions of the operatives' environment in some humid weaving sheds were below the standard existing in other industries. At the instance of this committee the Industrial Fatigue Research Board arranged for an investigation to be carried out to determine more precisely what would be the effect of increasing the air movement by the installation of special fans. This investigation was carried out by S. Wyatt, M.Sc., J. A. Fraser, B.A., and F. G. L. Stock and their report on the experiments made and the conclusions arrived at has just been given out.

The experiments were carried out in a small, humid weaving shed where 26 operatives tended 98 looms, the humidification being effected by steam jets. In this shed, the dimensions of which were approximately 132 x 33 x 20 feet, two pairs of fans (supplied by the General Electric Company) were installed, supplemented later by a third pair. They were of the gyrating type, with 12-inch blades, and ran at a speed up to 1,850 r.p.m., being suspended in pairs at a height of 10 feet from the floor over the center alley of the shed.

Outlining the conditions of the experiments, the report states that the cooling power of the air and the rate of air movement under different conditions were obtained by means of the kata thermometer. Wet and dry bulb thermometer readings also were taken in the shed and outside in the shade.

In order to obtain a comparison of output with and without increased air movement, pick recorders were fixed to 44 looms in the part of the shed affected by the fans, and readings taken at hourly intervals throughout the day.

The procedure adopted in these experiments was to run the fans on alternate working days over a period of eight weeks (through the summer), except during the last two weeks, when they ran continuously for a week and were then stopped for a similar period. In this way the effects of increased air movement during a period of warm weather could be determined. Wet and dry kata thermometer readings were taken during alternate half-hours throughout each day. During the remaining half-hourly periods a record was made of the nature, number, and duration of all stoppages on each of four selected looms controlled by one worker directly under the influence of one pair of fans. These observations were necessary in order to determine what effect increased air movement had on the number of yarn breakages. Additional information relating to warp breakages was obtained from three weavers operating 12 looms. At the beginning of each spell of work these weavers were supplied with cards on which they recorded the number of warp threads broken immediately after the ends were pieced and these cards were collected at the end of each spell of work.

The first study was a comparison of atmospheric conditions in the same position with fans stopped and fans running. The data collected showed that the average rate of air movement was 46 feet per minute with the fans stopped rising to 147 feet per minute (220 per cent increase) when they were running. The average cooling power of the air was increased from 4.2 to 5.6 by the fans, while the evaporative power of the air on moisture at body temperature was increased from 9.7 to 12.4, two increases respectively of 33 and 28 per cent. The use of the fans, therefore, gave what can be considered fairly satisfactory conditions for a weaving shed.

The effect of fans at different temperatures was then investigated and it was found that the increased air movement which arises from their use is most effective at the lower temperatures.

An experiment with the fans running at three different speeds, viz., producing an air velocity of 146, 108 and 87 feet per minute, respectively, demonstrated that they could be run at the slowest speeds until the temperature of the shed reaches 72.5 degrees F. From thence to 75 degrees the second speed should be used, and above this figure the highest rate possible.

Naturally, there is a general decrease in air velocity as the distance from the fans increases and it was found that the three pairs of fans failed to have much effect beyond a distance of 27 feet from the nearest fan.

The next point studied was the effect of increased air movement upon the frequency of warp breakages. Records were made from 16 looms over periods from 30 to 109 hours for each loom and from the statistics collected it appears that with the fans running there was a decrease in the number of loom stoppages due to warp breakages and also in the number of threads broken on approximately two-thirds of the number of looms observed, with an increase in the remaining third. No increase in the number of warp breakages can therefore be associated with the increased air movement produced by the fans, so that the latter do not have any significant drying effect on the warps. This may be due to the fact that the rate of evaporation of moisture in the warps depends upon the amount of water vapor in the surrounding air, says the report, and this amount is certainly not reduced by the fans, but on the contrary, increased, because the fans drive down the more highly saturated air from the vicinity of the humidifiers towards the warps.

To get at the effect the fans had on the output of cloth, readings were taken at hourly intervals from the pick recorders attached to the looms. The results were so arranged as to give as accurate a comparison as possible when the temperature, the relative humidity and the position of the spell were approximately the same in the different series. The investigators state that the averages, on the whole, indicate a somewhat higher output on the days when the fans were running then on the days when the fans were stopped. The average increase was 1.6 per cent. in the morning spell and 2.9 in the afternoon spell.

The report refers to the common assertion that a high temperature and relative humidity are necessary for successful weaving, it being even believed that the number of

warp breakages is said to vary inversely with these two factors. In the present investigation it was found that, in general, the number of loom stoppages due to warp breakages and the actual number of warp threads broken decreased as the relative humidity increased. Actually, the average percentage decrease in the number of loom stoppages for each successive increase of 2.5 per cent in relative humidity was 11.1, while the corresponding figure for the number of warp threads broken was 9.6. This rate of decrease is not uniform but becomes progressively less as the relative humidity increases and beyond a certain point (suggested as that corresponding to a relative humidity of about 87.5 per cent) the number of warp stoppages and ends broken begins to increase with an increase in relative humidity.

To arrive at the relation between temperature and warp breakages records were made of the average number of loom stoppages due to warp breakages and the number of warp threads broken per hour for differences in temperature of 2.5 degrees F. at a relative humidity of 75 to 80 per cent. It appears from these that temperature has, on the whole, a slight but positive effect upon the warp as shown by the number of loom stoppages due to warp breakages and the number of warp threads broken. The average percentage decrease in the number of loom stoppages for each successive increase of 2.5 degrees F. in temperature was 6.3, and the corresponding value for the number of warp threads broken was 5.5 Consequently, it is concluded that, within the practical limits of variation, temperature is less effective in this respect than relative humidity. Incidentally, when the temperature exceeds about 85 degrees F. the number of loom stoppages and threads broken tends to increase.

In determining the effect of relative humidity, output readings from the pick recorders on 44 looms were made on days when the average temperature lay between 75 degrees and 80 degrees F. These were arranged according to differences of 2.5 per cent in relative humidity. For comparative purposes the unit adopted was the average hourly output per day of 8¾ hours. It was found that the highest output was obtained with a relative humidity of 77.5 to 80 per cent. However, when the air becomes saturated above this point a decrease in output commences. In much the same way the effect of temperature on output was determined and the results obtained show that on the whole temperature has very little effect on productive efficiency as long as the relative humidity lies between 75 and 80 per cent. Both in the case of high humidity and high temperature often found in weaving sheds there appears no economic value owing to the increased frequency of warp breakages and the lessening of the operatives' working activity.

Experiments were also made with an 8-inch blade fan placed about 3 feet from the floor level. This was fixed and produced a continuous current of air directed slightly upwards towards one weaver. Observations made showed that this fan was more effective over a limited area than the larger fans overhead. It was certainly quite adequate for one weaver in charge of four looms and has the advantage that it can be so placed as to operate horizontally above the warps and can be run or not at the discretion of the weaver. An overhead fan with an interrupting device varying the number of revolutions per minute was also tried out. It is believed that the beneficial effects of a variable air movement of the kind are greater than those produced by a constant air velocity.

The human element has also to be taken into account. When the investigations were commenced some of the older operatives (women) raised objections on the score that the fans would create a draft of air. This is typical of the traditional fear of "drafts" that is so widespread amongst the operative class and there is no doubt then when any attempt is henceforward made to introduce fans in weaving sheds the bogey of "drafts" will be raised. However, on the whole the weavers approved of the stronger air current. Questioned as to whether they preferred to work with the fans running or not they replied in favor, saying: "They keep me cooler," or "I feel less tired, especially in the afternoons," or, simply, "They're fine." The fan habit grew until the weavers wanted them running even when it was necessary for the purposes of the investigation to have them shut off.

The investigators summarize the results of these experiments by saying that the increased rate of air movement created by the fans had a favorable effect on the operatives, and was also instrumental in increasing weaving efficiency. The arrangement and type of fans used in this case may, perhaps, not be the best possible. Their installation on a large scale would be a fairly costly matter, while, as their operational area is a fairly large one and takes in several weavers it is certain that amongst the latter there would often be one who objected to their being used for fear of "drafts." It is suggested therefore that perhaps it would be better to use a number of small fans operated mechanically from the looms, so fixed as to have a purely local effect over the working area of a single operative. The cost of running would only be small, while the fan could be switched on and off at the will of the weaver.

The report terminates by saying that the results of this investigation have shown that, although the number of warp breakages decreases as the temperature or humidity rises, the actual efficiency of production does not follow a similar course. This means that while the number of loom stoppages may be fewer as the shed atmosphere becomes hotter and more moist, the time taken in attending to these stoppages increases, because of the unfavorable effect of high temperatures and humidities upon the weaver. The best conditions for productive efficiency, at any rate in the particular weaving shed where these investigations were carried out, may be said to be given by a temperature of 72.5 degrees to 75 degrees F. and relative humidity of 75 to 80 per cent. From the productive standpoint, it is obvious that every endeavor should be made to keep the temperature and humidity within these limits, or whenever this is impossible, to neutralize their effect by increased air movement. This would also improve conditions for the operatives during the hot summer months.

H. HOLLAND has been made overseer of spinning at the Henrietta Mills, Caroleen, N. C.

A. BOWLAND has been made manufacturing superintendent at the Loray Mills, Manville-Jenckes Co., Gastonia, N. C., and W. Pickering has been promoted to the position of assistant manufacturing superintendent. Gordon A. Johnstone is resident agent.

THOMAS W. SCHOFIELD, formerly of the Amoskeag Manufacturing Co., Manchester, N. H., is boss twister at the James S. Gary & Sons plant at Alberton, Md.

CURRENT TOPICS

The Factory Does its Part and More.

Despite a drop of about 25 per cent in the average of prices, American factories that are reported on in detail every two years by the Federal Census Bureau turned out in 1925 a volume of goods that were worth more than the production of those factories in 1919. This indicates an increase of around 30 per cent in the aggregate production of American manufacturing. And the increase was achieved by more than a half million fewer workers.

Those facts are disclosed by the last census of manufacturing, final reports on which having recently appeared. During the six years that followed the World War something akin to revolution took place in manufacturing, which by every proper test progressed more than any other basic branch of industry or economic activity of any kind. If others, like railway transportation and mining, had gone ahead in the same way, economic progress during the period would have been even more astounding. If all the mechanism of distribution had advanced similarly, it would be possible for the average American to live as well in 1927, as one did in 1919, on the results of not more than two-thirds as much work as was done a few years ago.

The census shows a trend in manufacturing towards larger units, as, between 1923 and 1925, the total number of establishments declined. This has not happened before during periods of increasing production. Increase in output was shown by the reports of a vast majority of manufacturing groups of 1925. And nearly all of these achieved the increase with fewer workers.

Yet, in manufacturing as a whole the average of earnings per worker went up, despite a decline in the cost of living. "Real wages" are now the biggest ever known, though in manufacturing, where they have been most fully earned, the gains here have not been quite as large as in some other branches of industry that have done less.

Per worker output in manufacturing as a whole has increased remarkably, from 30 to 40 per cent since the World War. This is the result of a more extensive supplanting of animate with inanimate power than has ever taken place during a similar period of time.

While it increased, the total of primary power employed in manufacturing did not go up so much during the post-war years as during some earlier periods. The recent period was characterized by expanded utilization of the power consumed. The primary power employed for each worker increased nearly 25 per cent. This reflects greater advances in the use of labor-saving machinery and chemical processes than ever before made during even a quarter of a century period.

The figures foreshadow some new and interesting problems. What is becoming of the workers who, for the first time, are being positively displaced by machines? Hitherto, labor-saving machines have brought increases in operations more than compensating for the change from hand labor. The power loom widened the need for weavers as the sewing machine did for seamstresses. But manufacturing machines now are apparently reducing permanently the sum total of jobs within their immediate sphere. Increased production no doubt still brings about an increase in jobs in other spheres. Every automobile added to the number in operation extends the work of repair shops and filling stations, though the extra machine be put out initially, as in recent years, with a declining curve of employment in automobile manufacturing.

Will consumption continue to expand in conformity with the enormous increase in productive efficiency? Much of the producing world has been filling shortages brought about by the war as well as supplying new demands that are owing to raised standards of living. The part of it that is in this country has been at an immense advantage on account of demoralized conditions in much of Europe.

More shortening of work days and weeks, further additions to the country's store of leisure,—already more than the run of people know what to do with—seem to be in the offing as a necessary solution of problems brought about by extraordinary progress in the processes of factory and shop production.

Too Many "Special Weeks".

A recent study disclosed the annoying fact that lately the country has been afflicted with approximately 100 "special weeks" a year with a large number of "special days" thrown in for good measure. The "weeks" are set aside for all kinds of purposes—agitation on behalf of various commercial products as well as for the promotion of many personal and civic virtues. The "special days" have to do usually with matters of sentiment, being such as Mothers' day. But "days" are now set aside for communing with branches of the natural world, as for birds and fishes.

The only good thing in the disclosures is the fact that the "special week" and "special day" idea is being overworked to the point that means its early disappearance. There are not enough weeks and soon there will not be enough days to go around.

The Turmoil in China.

It isn't what is happening among the Chinese in China that bodes ill in noteworthy degree for the Western World. It is what it might lead to outside of China. This threat probably is slight.

What is happening among the Chinese is what has been taking place among them more or less regularly since the Manchu dynasty was overthrown nearly twenty years ago. China has been trying to find a new formula of government for an immense and always loosely organized empire. An educated Chinese in America recently said that similar turmoil has followed every change of dynasty there and that the average period covered by the process of readjustment is about fifty years.

It may be a long time still before the situation there becomes a thoroughly settled one. But the picturesque features of it may cause the sweep of the trouble to be greatly exaggerated. It is doubtful if at the worst, so

far, more than a tiny fraction of the vast population has been directly affected by the turmoil. Trade has gone on through it all and will continue to go on.

The anti-foreigners cry of the nationals might lead to serious international complications. Twenty years ago the present situation would have been provocative of huge military interferences on the part of outside powers, possibly an attempt to dismember and divide up the empire, and probably a world war. But the world, now recovering from a world war, is in no mood for anything like that.

The Chinese situation will be amicably adjusted—sometime.

Money Lending on the Grand Scale.

In April of this year, a total of $207,000,000 was invested in foreign loans by people in the United States. For several years the outflow, via loans abroad, has been at a rate of a billion dollars or more a year. The figures for the first third of it indicate that the export of capital may amount to a billion and a half this year. The country now has more than ten billion dollars commercially invested, mostly in the form of loans, abroad.

In only partial extent has cash been shipped out. Our gold reserves continue to increase despite huge loans. These loans usually are made, in the transference sense, in the form of goods. We have thus been getting rid of our surplus production.

Can it continue indefinitely? Hardly. Sooner or later we must collect the interest, if not the capital, in the form of goods. There is, however, almost no limit on the expansion of the consumptive powers of the American population.

Ocean Freight Rates.

One of the comparatively cheapest things purchasable in recent times and at present is ocean freight transportation. Calculations by experts in the U. S. Department of Commerce show that the general level of charter rates fell in the early part of 1926 to below the 1911-13 average. They went up a good deal when the British coal strike brought new business into the field, but on the passing of the strike the average of rates again declined. In May the index was only slightly above that prior to the World War.

Yet we are spending about $20,000,000 a year out of the Federal Treasury for the operation of Government-owned vessels at losses tantamount to one-third of the revenues from the business done. This, as claimed by sponsors of the operations, has had something to do with keeping rates low. But if the Government persists in keeping rates, for shipping in general, below profitable levels, it ultimately will have to operate all the shipping. In fact, rates would have been unusually low even if the Government had not operated a vessel. Without those ships, there were enough vessels throughout the world to do some 25 per cent more carrying than was available. In view of that condition, conspiracies by foreign ship-owners to hold up Americans could not have been quite practicable. In handicapping foreigners, the Government's operations have borne down even more on privately owned American shipping.

While giving lip service to a contrary program, it now is quite patent that the Shipping Board is proceeding on the assumption that Government operation of ships is to be permanent.

What the Southern Mills are Doing.

There were mills and rumors of mills developing for the South during the past month. The latest report up to this writing concerned a contemplation on the part of the Border City Manufacturing Co., Fall River, Mass., to move a portion of their spindles to some southern location. The mill in Fall River manufactures shirtings, sheetings, crepes and fancies; it now has in place there 113,764 spindles and 2,619 looms. William L. S. Brayton, treasurer of the company, has been South investigating various proffered sites.

Turning to the reports of new mills defintely announced, South Carolina is to receive a new plant in the form of a mill to be located at Marietta, north of Greenville, on the Greenville & Northern Railroad. S. Slater & Sons, Inc., of Webster, Mass., will locate a 30,000-spindle, 700-loom plant at Marietta, with an expenditure of about $2,000,000, where sateens and broadcloths will be manufactured. J. E. Sirrine & Company, Greenville, are the engineers. A plot of land has been bought at Marietta and an entire village and mill development will be carried out. Power will be purchased from the Southern Power Company. New machinery will be purchased, it is announced. It is understood further that at a later date Slater will add a bleachery and finishing plant to bring the total investment at Marietta to around $7,500,000.

The West Boylston Manufacturing Company, East Hampton, Mass., will erect a plant at Chisholm, several miles north of Montgomery, Ala., on the Atlanta and West Point Railroad. Robert & Company are the engineers. It is understood that a building and village will be developed, and that 30,000 spindles of the company's machinery at the No. 6 mill in East Hampton will be removed to the Alabama location. Cord tire fabrics will be manufactured.

Dr. L. G. Hardman, governor-elect of Georgia, who is president of the Harmony Grove Mills, at Commerce, Ga., has, with associates, promoted a cotton mill for Maysville, Ga., where, it is understood, a small weaving plant will be built. Dr. Hardman is elected president of the company, with W. F. Morris vice-president, W. P. Cooley secretary, and J. W. Shepherd, treasurer.

The Barrow County Cotton Mills, including a plant at Lawrenceville, Ga., and one at Winder, Ga., have been acquired by an eastern syndicate headed by Russell B. Lowe, of the Parkhill Mfg. Co., Fitchburg, Mass. It is understood that D. C. Finney, formerly located at Huntsville, Ala., will be general manager in charge of these plants under the new ownership, and that the properties will be improved and enlarged with the expenditure of approximately $500,000.

Acworth Mills, Acworth, Ga., recently added a brick cotton warehouse and opener room, 50 x 20 feet, one-story and basement.

Thomaston Cotton Mills, Thomaston, Ga., are installing 100 Duplex humidifiers manufactured by the American Moistening Company, Providence, R. I.

Dilling Cotton Mills, Kings Mountain, N. C., are installing 5,040 new tape-driven twister spindles, additional cleaning machinery, additional drawing frames, and Foster

MATHIESON
Industrial Chemicals

The Passing of The "Rule of Thumb"

There was a time when dyers and finishers made up dye baths and bleach liquors with a handful of this ingredient and a scoopful of that. The ingredients, too, were as indefinite as the quantities.

But with the building of new mills, and the formation of new organizations, new methods were introduced into progressive mills. Among the improved practices adopted is the employment of straight alkalies in place of variable alkali mixtures.

The new-day textile mill—the mill that is meeting the modern demand for higher quality at a lower price—has established standard processing formulas based on 58% Soda Ash and 76% Caustic Soda. Thus, it avoids changes or modifications in formulas sometimes required by the non-uniformity of alkali mixtures.

The use of 58% Soda Ash and 76% Caustic Soda also results in substantial savings in first costs, because the same amount of work can be done with smaller quantities of these standard alkalies.

CAUSTIC SODA
LIQUID CHLORINE
BICARBONATE OF SODA
MODIFIED VIRGINIA SODA
SODA ASH
BLEACHING POWDER
ANHYDROUS AMMONIA
AQUA AMMONIA

The location of Mathieson plants and offices is your assurance of prompt service. Specify EAGLE-THISTLE brand when ordering alkalies.

The MATHIESON ALKALI WORKS Inc.
250 PARK AVE. NEW YORK CITY
PHILADELPHIA CHICAGO PROVIDENCE CHARLOTTE CINCINNATI
Works: Niagara Falls, N. Y.—Saltville, Va.

Deal Direct with the Manufacturer

tensions for spooling. This mill recently changed over to finer counts of yarn.

Kesler Cotton Mills, Salisbury, N. C., are enlarging. Two new buildings, an opener room and a picker room, are being erected. The first will be 60 x 80 feet, one-story, and the picker room will be two stories, 80 x 100 feet. The cost of the work will be approximately $50,000.

Acme Spinning Company, Belmont, N. C., is building an addition which will double the capacity with the addition of 16,200 spindles.

Cross Cotton Mills, Marion, N. C., are adding 17 Saco-Lowell cards and 1,000 new Whitin spinning spindles, together with additional winders. Improvements in the mill and village are being made.

The addition reported for the King Cotton Mills, Burlington, N. C., will be one-story, 75 x 100 feet, and will house winders, twisters and warpers, it is announced.

Calton Yarn Mills, Cherryville, N. C., are enlarging by the addition of a new picker room in which new cleaning and picking machinery will be installed.

Rowan Cotton Mills, Salisbury, N. C., will install machinery in the recently completed addition, which will bring the total equipment to 17,600 spindles. A number of new houses will be added to the village.

Work has begun on the plant of the Thies Dyeing and Processing Company, Belmont, N. C. The building will be one-story, with basement, 143 x 217 feet. J. E. Sirrine & Company are the engineers.

Oneida Mills, Graham, N. C., will build a picker room, 40 x 100 feet.

Inverness Mills, Winston-Salem, N. C., are now installing 50 broad 20-harness dobby looms replacing existing narrow equipment.

Manville-Jenckes Co., Loray Division, Gastonia, N. C., will completely revamp the humidification system and install 200 Duplex humidifiers and 35 Amco humidity controls. American Moistening Company, Providence, R. I., is the contractor, it is announced.

Machinery to be replaced at the Columbia, Mills, Columbia, S. C., includes the entire spinning equipment, cards, pickers, fly frames and twisters. Machinery is being secured from Saco-Lowell Shops, and the Whitin Machine Works.

A warehouse addition is being erected by the Eureka Cotton Mills, Chester S. C.

L. E. Winnie, and associates, who have been operating a silk mill at Gloversville, N. Y., plan the establishment of a plant at Union, S. C.

Santee Mills, Orangeburg, S. C., will install 200 40-inch sheeting looms to replace existing equipment.

Aragon-Baldwin Cotton Mills, Whitmire, S. C., are building 25 additional cottages in the village.

A warehouse will be built at the Whitney Mfg. Company, Whitney, S. C. Lockwood, Greene & Company are the engineers.

The Valley Cotton Mills, Harlingen, Texas, will erect a 5,000 spindle mill. J. R. Roberts is president, with L. H. Thompson treasurer and S. F. Ewings secretary. The plant will be one-story, 100 x 240 feet. Electric power will be purchased, it is understood.

At the annual meeting of The Timken Roller Bearing Company, Canton, Ohio, all the present officers were re-elected for another year. H. H. Timken is president.

New England Mill Situation.

The extreme rush of spring business that led to a great deal of overtime work in New England finishing plants is about over and mills and finishers have still plenty of work to insure fairly large operations throughout the summer. All things now point to the best second quarter the New England mills have had in at least five years. The dividends for the past quarter in Fall River and New Bedford mills were very small but they had the advantage in having been earned.

The elimination of unproductive plants continues steadily. The Everett mill stockholders at Lawrence, Mass., do not show a disposition to come to the rescue of that property with the $750,000 required to put the company on a good working foundation. The senior member of the commission house in New York that represented the mill and declined to renew the paper unless additional capital was paid in, died during the month. He was Elisha P. Cronkhite of Smith, Hogg & Co., who was as well known in the South as in the East, as he had many investments in southern mill properties and was a director of several southern banks. It is expected that the company will be liquidated but the well known brands of Everett Classics and others will be retained in the markets.

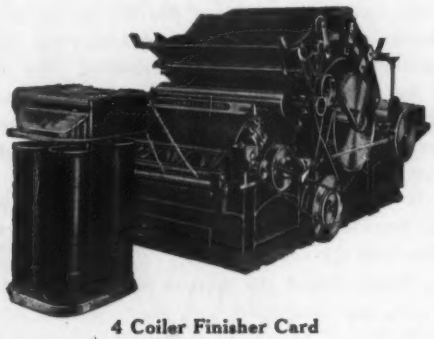
The Nockege mills at Fitchburg, that have been idle for a year, are to be sold, in toto, this month and it is presumed that the plant will be dismantled. The stockholders of the Hamilton mills of Lowell, Mass., who have resisted the liquidation of that property have been overriden by the courts and it is expected that it will be finally sold. The parts of the Massachusetts mills at Lowell not wanted by the Pepperell Company that bought the plant are gradually being dispensed with and other parts are being operated in full and at a profit. The southern branch is running in full and is reported to be making money. The portion of the Tremont & Suffolk plant in that city leased to the Nashua company is operating profitably on blankets.

In New Hampshire, about 65 per cent of the Amoskeag Company's cotton manufacturing plant is being operated at a profit and the wage agreement between operatives and managers has been continued for another six months unchanged. The idle machinery is largely that portion devoted to gingham production. The business on flannels, tickings, bleached cottons, rayons, and some of the ginghams has been satisfactory in volume, but ginghams running from 12 1/2 cents to 16 1/2 cents a yard have not sold as well as those priced below and above those figures, and the Amoskeag has suffered in common with plants equipped for similar work.

In New Bedford, the mills that were financially crippled have about all been taken care of. The Page mill was sold and is to be operated independently, the proceeds of the sale having gone to the Gosnold. In Fall River, the directors of the Border City Mfg. Co., have voted to move a part of the machinery to a southern site not yet announced. This plant formerly worked profitably on curtain materials and shade cloths, and many specialties, and is well equipped, but unable to withstand the market competition forced by plants enjoying less restrictions of a legislative character, and a lighter taxation.

The Pocasset mills in that city are being dismantled by vote of the parties who secured control of them about a

UTILIZE YOUR COTTON WASTE



4 Coiler Finisher Card

The Facilities of Our Waste Plant Are at Your Service

At our plant at Newton Upper Falls, Mass., we operate a complete miniature waste mill in which is installed a full line of our waste reclaiming and spinning machinery.

This unit is run for the sole purpose of experimenting with the waste of various mills, to determine the best method of handling it. This service is freely and cheerfully given to any mill desiring to take advantage of it.

Why Not Send Us Some of Your Waste?

And let us work it up for you. We will submit a complete report of the results and methods used, together with samples of the results obtained. Let us help you with your problems.

We Are Specialists in Waste Working Machinery

SACO-LOWELL

Largest Manufacturers of Textile Machinery in America

147 Milk St., Boston, Mass.

Charlotte, N. C. **Greenville, S. C.** **Atlanta, Ga.**

year ago. The directors of the American Linen Co., in that city, have voted to discontinue operations and the plant, adjoining the active mills of the American Printing Co., are idle. The stockholders of the Granite mills in that city have been asked to provide money for a reorganization by reducing and then advancing the capital and the proposition will be voted on shortly. The Seaconnet mills that were sold at auction are being revamped and will resume operations next month under the ownership of a New York converter who will spend half a million dollars or more renovating the plant. One of the Stafford mills is still idle. The Ancona Company was bought in by the bondholders and it is not yet announced what will be done with the idle plant.

In Rhode Island the reorganization of the Wayposset Mfg. Co., was completed with the assistance of William Iselin & Co., of New York and is to be restarted to produce fancy gray cloths in silk, rayon, and cotton, for the converting trades. The Manville Company has resumed operations but in this state as in many others in New England there are several plants that remain closed and will not be re-started under present legislative and tax conditions, unless large sums are forthcoming for reequipment.

It might well be inferred from this list of lame ducks all over the section that New England was in pretty bad shape. As a matter of fact, there is more real confidence in the future of the industry in the section than there has been for five years past. Reasons for it are not hard to find. There are several plants that are active and making money. The whole spirit of the people has changed toward industries and it is no longer popular to make political and social capital by decrying cotton mills and their managers.

Throughout the whole section in the past month there have been dozens of local demonstrations of loyalty to the industry itself. Style shows, cotton balls, and meetings of citizens to talk over what may be done to reincarnate defunct properties have been going on. Financiers are not quite so cold in the matter of giving assistance to mills that show some earning capacity. There is little doubt that further machinery will be removed to the South but the removal will be done as a part of changing over existing plants to make them more profitable, while accepting opportunities to re-establish productive machinery in sections where advantages of location will admit of profitable competition in the markets.

One of the curious facts of the situation is that in Fall River, it has virtually been decided to rebate a half million dollars to the local mills for over-taxation, rather than go through another court procedure in which the odds will be against the assessment boards. In that city also, a technical high school worth a million dollars was totally destroyed by fire and was uninsured. Within a week the municipality voted to rebuild at once.

In a Massachusetts city where a large woolen mill is located, notice was given that if a ten per cent wage reduction was accepted by the operatives the plant could be continued in operation. The reduction will be accepted. In several other manufacturing centers there have been wage revisions made without formal notice and they have been accepted, generally in ways that show a desire on the part of workers to make the most of a changed condition.

The floods along the Mississippi have changed the opinions of cotton manufacturers greatly concerning the probable worth of the staple for another season. There has been a very sharp rise in the prices of long staple cotton of American growth, and some mills have been buying Egyptian staples because of the certainty that the floods will delay the maturity of cotton in the replanted areas. New Bedford mills will be especially hard hit but so will mills everywhere using cotton for fine yarns from combed stock.

It also seems clear to most manufacturers that the reduction of acreage so carefully and generally fostered before the floods became widespread will certainly cut down the yield in a year when a substantial crop might prove to be the salvation of an industry that has been making a game fight against a combination of high cost raw material and bad merchandising.

The experience of the year has shown that rayon is here to stay as a very large factor in cotton mill output. Many cloths now being made will doubtless be looked back to in the longer future as marvelous in their unserviceability, and equally marvelous because of their salability. But so many mills have conducted successful experiments with yarns of a particular grade in combination with combed yarns, or with yarns wanted in draperies, and bed coverings, that there is ample justification for the confidence expressed in the possibilities of using rayon profitably in conjunction with well prepared fine carded and well combed cotton yarns for dress and many other purposes now being devised as new uses.

At this time the mills as a whole are well enough sold to insure reasonably steady operations through August. Great care is being taken to avoid stock accumulations as it is felt in this section that the South is greatly overdoing night and day operations, and moving in a direction that may affect the whole market adversely in the event of resistance on the part of consumers to price advances for goods in the early fall.

This subject was talked over in private a great deal at the recent convention of the cotton manufacturers at Atlantic City and has led to less confidence in the ability of the Cotton-Textile Institute to effect reforms that ought to come about easily when facts are fully known. It is pointed out that if manufacturers will not limit their output of their own volition when they have before them such broad hints as those given by President Hines, and supplemented by the facts of large output and close prices, there is much that must happen in the way of financial reorganizations in the industry before cooperation of real consequence can be made effective.

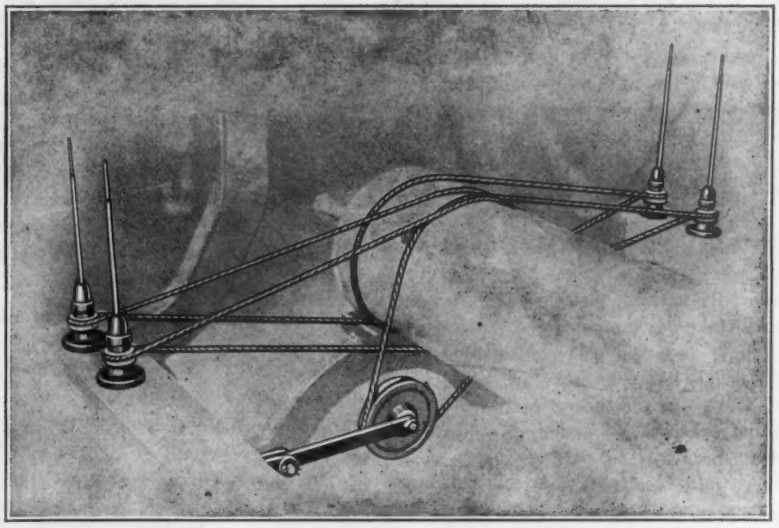
There is every reason to expect that a further large investment of textile capital in the South will be made by New England men and New England corporations. Instead of tending to draw the two large national cotton manufacturers associations together, the conditions each will have to cope with in their own field will be so different, that such a thing as a merger of the two bodies would prove suicidal.

The South is going to have before it before long many of the problems that have been solved through bitter experience in New England, and with New England men a part of the southern investment, plans for working out remedies as various new situations arise, can be made effective if the two bodies retain their own vigor and view point, and devote more of their time to the technical development of industry in their sections, leaving executive and administrative plans to be worked out in the Institute.

H & B AMERICAN MACHINE CO.

PAWTUCKET, R. I.

COTTON MACHINERY



PATENT TENSION DEVICE FOR BAND DRIVEN SPINNING FRAMES AND TWISTERS

This device is a four spindle drive which has been developed, thoroughly tested under actual working conditions, and is now in use in a number of mills.

All the fine qualities of tape drive are embodied in this device with the additional advantages of lower cost of upkeep.

Uniform speeds are obtained assuring more even twist, and slippage is reduced to a minimum, due to the large contact area of the band with the cylinder and spindle whorl; this being double that of tape driven spindles.

Soles Makers and Licensees

H & B AMERICAN MACHINE CO.

Pawtucket, R. I.

Southern Office, 815 Atlanta Trust Co. Bldg., Atlanta, Ga.

Cotton Comment.

H. AND B. BEER.

New Orleans, May 14th, 1927.

Excessive rains during the past month in the western half of the cotton belt, followed by the coming of the greatest and most destructive flood ever experienced in the Mississippi Valley, influenced a further important advance in the cotton market of about $10 per bale compared with about one month ago, part of which advance was lost of late by better weather inland and improvement reported in the river situation upstream.

The general impression is that land that made about one million bales last year in the river counties of Missouri, Arkansas, Mississippi and Louisiana was inundated, but it is believed that with the receding of the water, planting and replanting in the overflowed district will be resumed, perhaps to the extent of about 50 per cent of the area originally intended for cotton, in which case, if good weather prevails, at least a half crop in the affected districts may be made.

It is probable, and only natural, that the more favored sections of the belt will take advantage of the flood situation in the central valleys and seed a larger acreage than originally intended, which is likely to make up, in part at least, for the loss of acreage in the central belt.

Outside of the inundated area, the new crop appears to be making satisfactory progress, except in Oklahoma where the start is very late because of wet soil. In the South Atlantics the season is well advanced. In Texas there was the need of rain in dry areas of the western and southern portions of the State, but recently those sections were visited by generous, well distributed rains.

As to the probable average decrease in acreage for the belt this year, private returns point to a reduction of 10 to 15 per cent, or about the same as expected earlier in the year, but advices denote a larger use of fertilizer than originally intended. According to the National Fertilizer Association sales of tags for the month of April were 29 per cent larger than for April, 1926, but for 5 months, December to April, they were only 83 per cent of the same period last year, which, however, is more than anticipated earlier in the season.

Meanwhile, according to data furnished by Secretary Hester, the world is taking care of last year's record crop in a manner surprising to the trade, making it imperative for the South to make at least a moderate crop for next season's requirements.

Thus far this season the South has marketed 18,137,000 bales vs. 15,444,000 to even date last season, exports from the United States have been 10,051,000 bales against 7,194,000, and spinners of the world have taken of American cotton 15,057,000 bales compared with 13,109,000.

Even if exports during the remainder of the season were no larger than they were after this date last year, total exports for the season would amount to 11,109,000 bales, but the chances are that they will approximate 11,500,000.

The more important feature of the situation is that spinners of the world have already taken of American cotton this season 1,948,000 bales more than to even date last year, and as takings for the whole of last season were 15,090,000 bales, they are naturally now running on a basis for the whole season of 17,038,000 bales even if takings were no larger than they were after this time last season, whereas they promise to be larger, making it probable for the world to have taken about 17,500,000 bales before the season draws to a close.

WORLD'S AVAILABLE SUPPLY OF AMERICAN COTTON MAY 13TH, EXCLUSIVE OF MILL STOCKS.

Bales—	This year	Last year
In Europe and afloat for Europe..	2,778,000	1,379,000
At U. S. ports and 28 int. towns ..	2,378,000	2,062,000
World's visible supply	5,156,000	3,441,000
Unmarketed, about	2,345,000	2,205,000
World's available, about	7,501,000	5,646,000

As to the near future course of the market much will depend on future weather developments and activity of insects. At the moment showers are needed in the Atlantics, and a period of dry, warm weather is desired in other portions of the belt.

Another week or two will likely bring a big improvement in the flood situation since the water has already begun to recede in Arkansas and northern Mississippi.

Georgia Mill Men Meet at Ga. Tech.

(*Continued from page* 786.)

mill executive?

"I am with the Columbus Mill of the Bibb Manufacturing Company—a mill of 125,184 spindles, all of which are on tire fabric yarns. In our Columbus organization we haxe six Georgia Tech graduates and four graduates of other colleges in the positions of overseers and superintendents. Having been the first one of the six Georgia Tech graduates, which I have mentioned, to enter our organization I have seen not only from my own personal viewpoint the things that would have helped had they been given at Tech, but from my observation of the experiences of the other five. Plutarch said: 'To find fault is easy, to do better may be difficult.' Knowing that Georgia Tech has been handicapped for a lack of funds, both for instructors and equipment, I will briefly summarize the changes which I believe will be easily possible within a short time, were they accepted by the authorities of the school.

"1. Keep all equipment clean and in first-class condition at all times.

"2. Establish a well equipped testing laboratory.

"3. Institute a more complete grading and stapling course.

"4. Have detailed reports made on all experiments on machinery.

"5. Give more time to mill organization, including labor schedules, machinery layouts and power requirements, also to cost finding and systems for machinery maintenance.

"1. Most of the equipment of the textile school has been donated by different machinery manufacturers. One leading machinery company representative once remarked that they were glad to give machinery to the textile schools, but that usually it was not kept clean and they were ashamed of its appearance. This criticism may or may not now apply to the machinery at Tech, but as a constant reminder of their attitude, every detail of cleaning should be most carefully regarded. This also stimulates the students to give more thought to proper cleaning, which is one of the

SUMMER!

NOW comes summer—its drowsy afternoons—its let-up effects of a hard winter's work telling on the personnel of your plant. How satisfactory it is to know ***that your Halton Jacquards*** are functioning with the ever-same accuracy and dependability which a Halton machine stands for year in and year out.

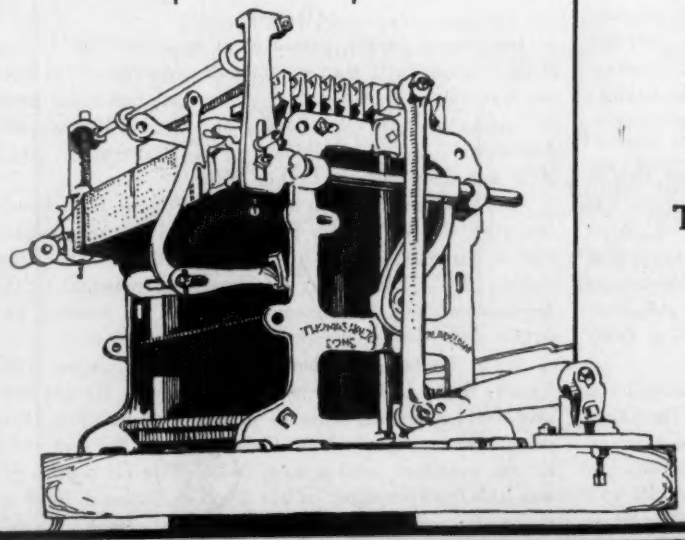
No change in action Winter, Spring or Summer, ever dependable.

We do harness building of every description.

We are prepared to furnish at short notice comber-boards, lingoes, mails, etc., Ingrain and Brussel parts.

We do replacing and repairing of Jacquard machines of other makes as well as our own.

Immediate and expert attention our guarantee.



THOMAS HALTON'S SONS

Mascher St. below Oxford
Philadelphia

H. A. Forber, *Selling Agent*
P. O. Box 1663, Paterson, N. J.
Telephone Lambert 8592-W

"Use Halton Jacquards—
And You Use the Best"

most essential considerations in the actual operation of a mill. Aside from the improved quality of the goods produced and the good effect on operatives, what mill executive does not have a feeling of pride when he has visitors or higher officials inspecting his mill when it is clean and orderly?

"2. A modern textile testing laboratory should be started at once. It should be equipped with a finely controlled humidifying system and such testing machinery as bone dry ovens, single and ply yarn testing machines, fabric and tape breaking machines, crimp and gauge tester, etc. This growth might be gradual, but a start should not be delayed. No textile research work or even normal experiments can be carried on without machinery for testing the product in its different processes of manufacture.

"3. A more complete cotton grading and stapling laboratory should be established and samples of all standard grades and staples should be kept on hand and up to date. A good course in grading and stapling should be instituted and different grades of cotton should be run in the experiments in the mill. Cotton samples could be easily obtained from the large cotton brokerage or warehouse companies.

"4. The theory that is given in the textile course is good, also the laboratory work in dyeing, designing and chemistry. The practical experiments made on the textile machines to form a backlog to the theory are, in my opinion, not giving the results which they could be made to give under more systematic and efficient methods. If in the same amount of time now given to the operation of of machinery, more data and information is recorded and reports made on the experiments, the student will be greatly benefited. This system is used in the work that the textile student has in the experimental and electrical engineering laboratories of the school. A part of the electrical experiments that are made by the textile student in the electrical drives of the textile machinery under varying operating conditions, particularly of speed. A knowledge of the power required at a certain speed is essential when a change in speed is contemplated without changing the driving motors.

"The setting of various machines, particularly the card, should be made by all students and checked by the man in charge and accurate and full notes made on all settings. The waste made with different cottons and the different settings and speeds of the machinery with the same cotton should be accurately recorded at each point. The humidifying system should be kept in perfect operation while making all experiments.

"5. Profits are essential to the life of business. Profits can be fairly accurately predetermined if complete records of costs are maintained. Different schedules of labor should be prepared for mills producing different styles of goods and the rates per hour or piece rates should be given for each employee. Knowing the theoretical and practical productions obtainable from each machine, a fairly accurate cost can be figured.

"There is not a manufacturer here who will not tell you that the requirements of his customers are more rigid than ever before and if he does not meet those requirements and show a profit for the stockholders, his competitor who can meet those requirements will get the business.

"There are already many Georgia Tech men in positions of responsibility in the Georgia and other southern mills, but there are some manufacturers who are skeptical about the average Tech graduate being of value to the mills and can show instances to back their contentions. The purpose of this meeting is to find out all of the weak points used in the training of these men and strengthen them to the point where the Cotton Manufacturers will be requiring more Tech graduates than the school can produce. Then the Georgia School of Technology will be performing a super-service to the cotton manufacturing industry.

"I read the other day the quotation, 'Soft heads do more harm that hard hearts.' A raising of the requirements along certain lines and being a little more hard hearted when the student does not measure up will stop the soft heads that some of the Georgia manufacturers complain of and make even better men out of those who have been sucessful.

"Emerson said, 'Nothing great was ever achieved without enthusiasm.' The Georgia School of Technology has received this opportunity to cooperate with the Cotton Manufacturers of Georgia with enthusiasm and something great should come from it."

Mr. Simmons, after covering the matter of the textile school proper, discussed also some technical phases, and his paper is utilized in the "How Other Men Manage" department of this issue.

M. L. Brittain, president of Georgia Tech, concluded the session with an interesting discussion of the program of the morning.

After luncheon, which was served in the dining room at Georgia Tech, the members disbanded into groups which played golf and found other diversions until Tuesday evening, when they again assembled for the annual banquet. No formal program was scheduled for this occasion, it being characterized by the president as the "annual party", and every feature was thoroughly enjoyed. Musical entertainment was provided by musicians of Georgia Tech. The election of officers was conducted at the banquet, and a resolution was adopted extending appreciation to Retiring President Harris for his efforts. W. M. McLaurine, who recently left the Association as secretary to assume the same position with the American Cotton Manufacturers' Association, was presented with a medal for his work on behalf of the Georgia mills.

Obituary

Lee Mason Jordan, president of the Gate City Cotton Mills, College Park, Ga., and former president of the Cotton Manufacturers Association of Georgia, died at his home in Atlanta on May 3rd following an extended illness. Mr. Jordan also was vice-president of the Cartersville (Ga.) Mills and the Piedmont Cotton Mills.

E. T. Comer, chairman of the board of the Bibb Manufacturing Co., of Macon, Columbus, and Porterdale, Ga., died in his 84th year at his home in Millhaven, Ga., last month. Mr. Comer, who was largely instrumental in the developments of the organization which he headed, had retired from active business several months earlier.

W. M. Hagood, president of the Glenwood Cotton Mills, Easley, S. C., died at his home on May 14th. He had been president of the mill since its organization in 1902. Five years later he organized the Pickens Cotton Mills of which he was president until a short time before his death. He was also vice-president of the Peoples National Bank of Greenville, president of the Commercial Bank, Easley, director of F. W. Poe Mfg. Co., and the Pickens Bank.

TEXACO—for Dependable and Economical Lubrication—TEXACO

Showing HOW

TEXACO LUBRICATION ENGINEERS

help reduce Power Costs

TEXACO Lubrication Engineers know their job.

With utmost confidence and promptness—regardless of the type of machine or conditions — they have been able to suggest ways and means of cutting lubrication costs, improving machinery operation, increasing production and enhancing profits.

In one Textile Mill the start was made on the spinning frame spindles.

There, our engineers volunteered to reduce the temperatures by replacing the oil used, with TEXACO Spindle Oil.

This was agreed to, and all of the frames were lubricated with Texaco Spindle Oil—with the exception of 12 frames which were left with the ——— Company's oil, a product of high quality.

After the change, it was found that the spindles lubricated with TEXACO Spindle Oil were decidedly cooler than those lubricated with the old oil.

And we went even further:

We put TEXACO Spindle Oil on *one side* of the 12 frames using the old oil, and *in ten minutes* the temperature of these spindle bases also dropped.

In the end, friction was considerably reduced, and a material saving in power effected.

This shows only one of the many possible ways in which you may benefit by calling (without obligation or cost) upon the services of our Textile Lubrication Engineers.

There is a TEXACO LUBRICANT for every purpose in the TEXTILE INDUSTRY

And, you will find, as many mills attest, that TEXACO TEXTILE LUBRICANTS are of the highest quality, and the most economical to use.

THE TEXAS COMPANY

Texaco Petroleum Products

Dept. C6, 17 Battery Place, New York City

OFFICES IN PRINCIPAL CITIES

NOTES ABOUT MEN YOU KNOW OR KNOW ABOUT

B. G. STUMBERG has been made superintendent of the Anchor Duck Mills, Rome, Ga., succeeding John S. Bachman, who resigned effective May 1st. Mr. Stumberg has been superintendent of the Tallassee Mills, Tallassee, Ala., for several years.

LEE SENS, formerly connected with the testing laboratory of Callaway Mills, LaGrange, Ga., has been made assistant superintendent of the Tallassee Mills, Tallassee, Ala.

MAJOR H. RAIFORD GAFFNEY, instructor in textile designing and fabric analysis at North Carolina State College Raleigh, N. C., has resigned to accept a position with William Iselin & Company, New York City, and will spend a considerable portion of his time with the Wayposset Mfg. Co., Pawtucket, R. I., whose account the Iselin company recently secured. Major Gaffney, who is a native of Gaffney, S. C., is a graduate of the College of Charleston, S. C., and of the textile department of the Georgia School of Technology, Atlanta, Ga. Previous to his connection with State College he was with the Judson Mills, Greenville, S. C., and the Mooresville Cotton Mills, Mooresville, N. C.

G. W. GUNTER has been made superintendent of the bleachery at the Mooresville Cotton Mills, Mooresville, N. C. He was formerly at the North Carolina Finishing Co., Salisbury, N. C.

HOWARD R. HART has been made superintendent of the Victory Manufacturing Company, Fayetteville, N. C. He was formerly at Spindale, N. C.

G. W. HOLT has been promoted to the position of overseer of carding at the Augusta Factory, Augusta, Ga.

G. F. CHAMBLEY recently was promoted to the assistant superintendency of the Tifton Cotton Mills, Tifton, Ga.

JAMES PARTINGTON, president, JOHN STOCK, and GEORGE ILLINGWORTH, constituted the committee in charge of a banquet held by the Falco Cotton Club of the Farr Alpaca Co., Holyoke, Mass., recently. There were several addresses and various entertainment and prizes to the winners in the bowling league were distributed by T. L. Warbuton, vice-president and founder of the organization.

ROLAND H. GRAY has been made resident manager of the new mill of the Connecticut Mills Co., at Decatur, Ala. N. B. Greenleaf is assistant manager.

J. E. CARTER has been made local manager and superintendent of the Latsch-Hazlewood Cotton Mills, Inc., Munford, Ala. He was formerly overseer of carding at the No. 2 Mill of the Profile Cotton Mills, Jacksonville, Ala.

E. O. ANDERSON, president of the Rhyne-Anderson Mills Co., and Milton Ensor, secretary, treasurer and manager, have sold their interest in the company and tendered resignations to the board of directors. Wesley T. Heath, of Charlotte, purchased Mr. Anderson's interest and is the new president. Mr. Ensor will continue in charge until a successor in his position is appointed.

ERNEST C. MORSE has been made head of the section of new uses of the Cotton-Textile Institute, Inc., and George W. Duncan has been engaged as cost accountant of the Institute, it is announced by President Walker D. Hines.

J. R. MANLEY has resigned as overseer of carding at the Apalache plant, Victor-Monaghan Co., Arlington, S. C., to accept a similar position with the Norris Cotton Mills, Cateechee, S. C.

SAMUEL T. PEACE, president of the First National Bank of Henderson, N. C., has been made vice-president and general manager of the Roanoke Mills Co., Roanoke Rapids, N. C., and treasurer of the Rosemary Manufacturing Co., Rosemary, N. C. He succeeds W. S. Parker as treasurer of the Rosemary, and W. Lunsford Long in the position with the Roanoke Mills Company. Mr. Parker continues as president of Roanoke, and William L. Manning as vice-president and general manager at Rosemary. Thomas C. Wilson, of New York, is president of the Rosemary succeeding Mr. Long.

W. W. SCHOFIELD for many years overseer of spinning, spooling, warping and slashing at the Dundee Mills, Hooksett, N. H., has resigned to take up his duties of overseer of carding, spinning and twisting, with James S. Gary & Sons, Alberton, Md. Before leaving the Dundee Mills, the management joined with the help in surprising Mr. Schofield by making him a present of a gold ring with emerald setting, engraved gold cuff links, fountain pen and a bill fold.

JOHN R. BARLOW has become superintendent of the Sauquoit Spinning Company, Gadsden, Ala. For a number of years he has been superintendent of the Standard-Coosa-Thatcher Company, at Piedmont, Ala.

ANDREW J. KELLY has been made analytical chemist for the Burkart-Schier Chemical Co., Chattanooga, Tenn. Mr. Kelly is a graduate of the College of Charleston and has had practical textile experience. E. L. Fletcher has been made chief chemist, it is announced by William J. Kelly, Jr., sales manager of the textile manufacturing division.

E. L. SORD has become overseer of spinning at the Brazos Valley Cotton Mills, West, Texas. He has been night superintendent of the Houston Yarn & Twine Mills, Houston, Texas.

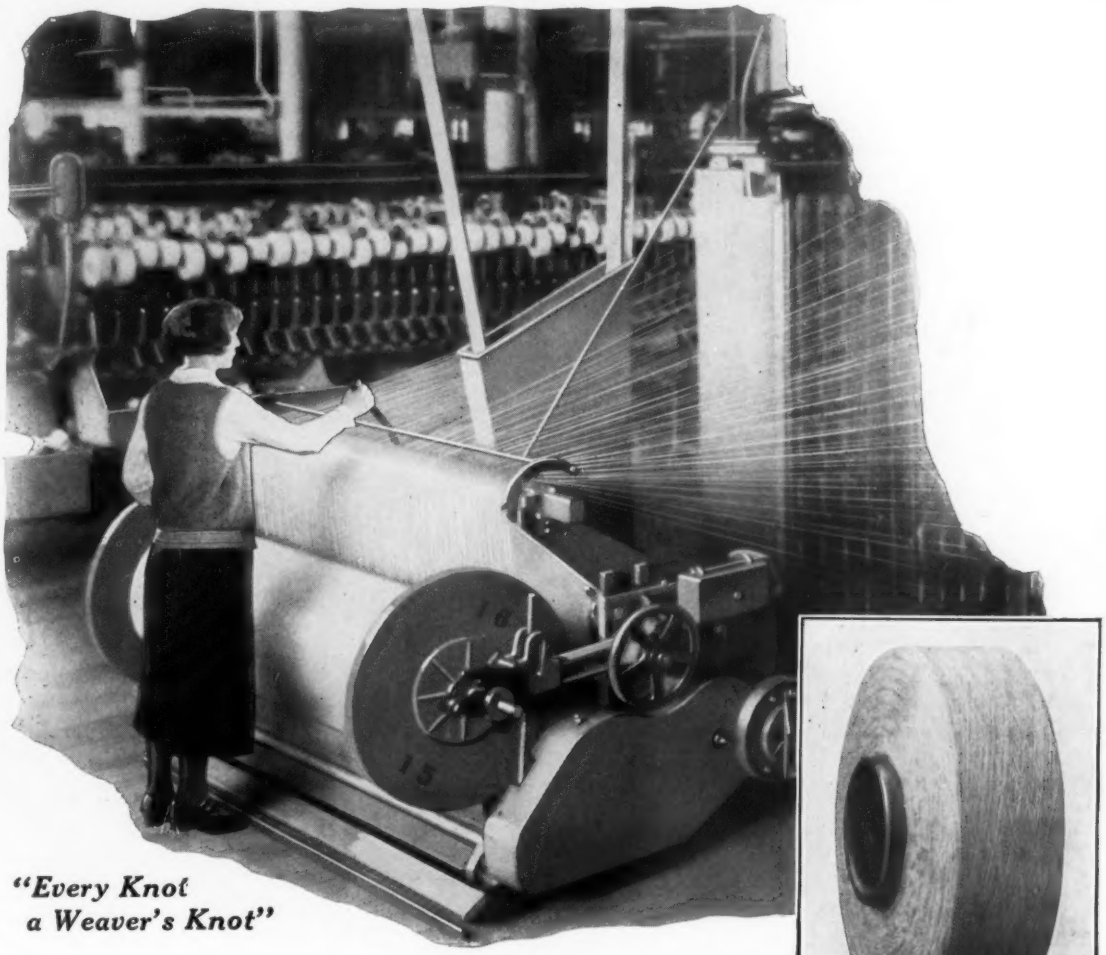
MARION T. GRIMES has been made superintendent of the Chicopee Mfg. Co., Gainesville, Ga.

J. W. JOLLY has been made superintendent of the Yazoo City Yarn Mills, Yazoo City, Miss.

J. H. HAFNER has been promoted to the position of manager of the finishing plant at the Irene Mills, Gaffney, S. C., succeeding John W. Boozer, who has become manager of finishing at the Halifax Cotton Mills, South Boston, Va.

S. J. BRUCE has become secretary of the Camperdown Mills, Greenville, S. C., succeeding R. B. Smith, resigned.

JOHN R. HALLMAN has become overseer of weaving at the Inman Mills, Inman, S. C. He was formerly night superintendent at the Chesnee Mills, Chesnee, S. C.



"Every Knot a Weaver's Knot"

Air friction furnishes the spooling tension — necessarily low and uniform. Ball bearing cheese cores offer minimum resistance at high warping speeds.

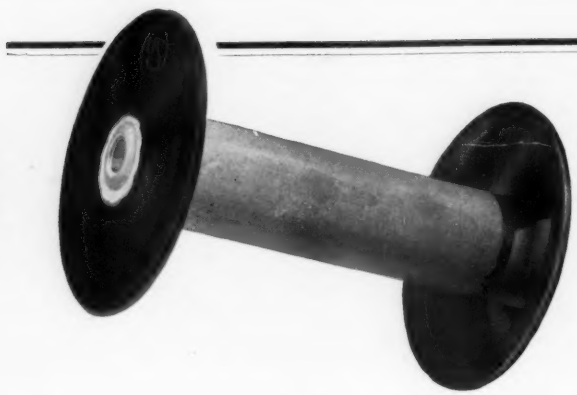
BARBER-COLMAN Automatic Spoolers and High Speed Warpers—the combination that makes high production—low operating cost. Yarn spooled and warped the Barber-Colman way reaches the loom with Weaver's Knots and with the elasticity that it contained when it left the Spinning Room.

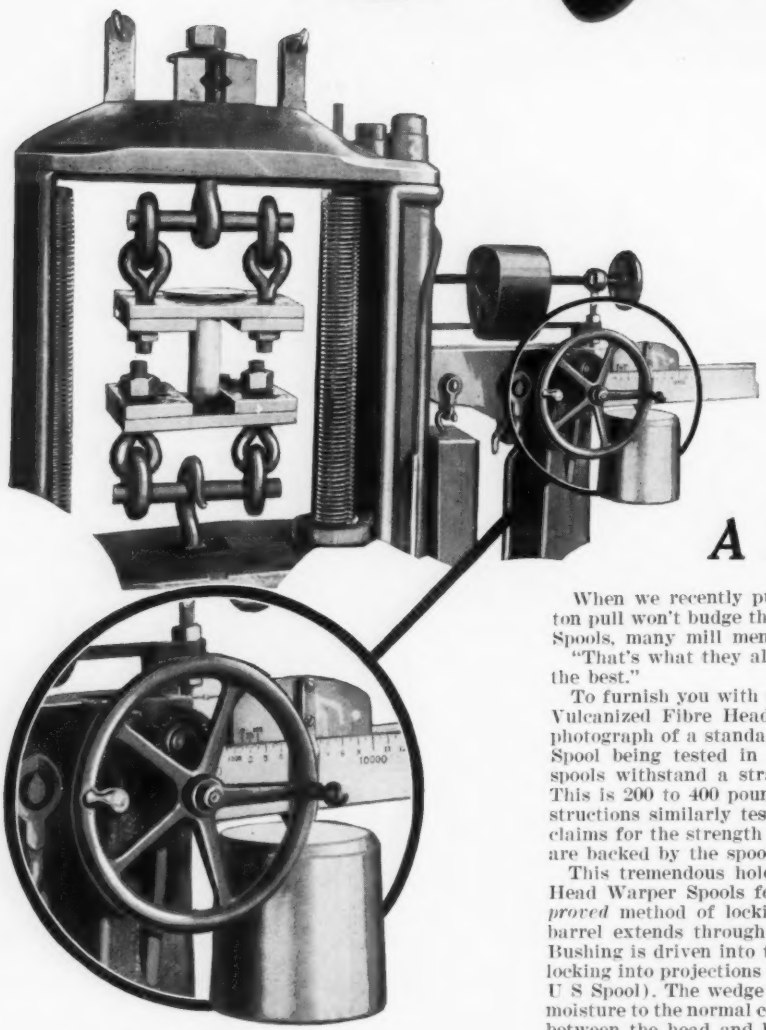
BARBER-COLMAN COMPANY

GENERAL OFFICES AND PLANT

ROCKFORD, ILL., U. S. A.

FRAMINGHAM, MASS. GREENVILLE, S. C.





Who Said These Spools Can't Stand A 1000-pound Pull?

When we recently published an advertisement stating that half-a-ton pull won't budge the heads of U S Vulcanized Fibre Head Warper Spools, many mill men who had never used these spools remarked, "That's what they all say. Every manufacturer claims his spool is the best."

To furnish you with unbiased proof of the superior strength of U S Vulcanized Fibre Head Warper Spools, we are printing this actual photograph of a standard U S 4″ x 6″ Vulcanized Fibre Head Warper Spool being tested in the laboratory of Brown University. These spools withstand a strain of 1200 to 1400 pounds before letting go. This is 200 to 400 pounds above the breaking point of all other constructions similarly tested. Surely this is convincing proof that our claims for the strength of U S Vulcanized Fibre Head Warper Spools are backed by the spools themselves.

This tremendous holding power has been a feature of U S Fibre Head Warper Spools for over ten years, and is the result of an *improved* method of locking the heads to the barrel. A tenon on the barrel extends through the head of the spool. A tapered Dogwood Bushing is driven into the hollow end, forcing the tenon outward and locking into projections cut on the fibre heads (a special feature of the U S Spool). The wedge is bone-dry when pressed in and soon absorbs moisture to the normal content of wood and expands, making the joint between the head and barrel more solid than one-piece construction.

Consider the advantages of using spools with heads that will not warp in regular mill usage, come off or apart, crack or sliver. U S vulcanized Fibre Head Warper Spools are so guaranteed in construction and are further guaranteed to give long service and satisfaction. These advantages coupled with the U S guarantee make U S Vulcanized Fibre Head Warper Spools a good investment even for the mill which buys strictly on price.

You want spools like these. Why not order yours to-day?

WRITE, PHONE, OR WIRE!

U S Bobbin & Shuttle Co.

PROVIDENCE, R. I.

This laboratory test is typical of the many exacting experiments which our engineers conduct to maintain the high standard of U S Products.

When we make a statement regarding U S Bobbins, Shuttles, or Spools, you can be sure that what we say is proven by tests and backed by the entire resources of this organization.

BRANCH OFFICES

GREENVILLE, S. C.
HIGH POINT, N. C.
PHILADELPHIA, P. A.
ATLANTA, GA.

BUILDERS OF BETTER BOBBINS, SPOOLS, AND SHUTTLES

AN OLD TIMER SAYS

In working with zest and giving his best,
Just for the pleasure of the giving,
In the hope of helping his brothers along,
"Old-Timer" finds the sunshine of living

You know that old law of "Supply and Demand" applies to practically everything we human beings have anything to do with in the way of making a living.

For example: Because there are about ten clerks for every job instead of ten jobs for every clerk is the reason why a clerk's pay is so small.

Because there are more overseers and superintendents who can only fill the little jobs is the reason the pay is little.

I made the remark not long since that there were many $10,000 jobs going "a begging" and it is simply because there are so few $10,000 men.

Many men do not believe that statement, but it is certainly very true. In fact so true that you can hardly find a big corporation or big business man anywhere who will not tell you that his greatest responsibility is to find big men to fill his big jobs.

Of course you understand I am using the word "big" in a slang way and take it for granted that you know I am speaking of men who are capable of assuming large responsibilities—men who are making every effort to improve themselves in a knowledge of the business in which they are engaged—men who are using their spare time reading the printed matter pertaining to their line of work—men of imagination. Imagination or vision is the foundation of all progress. Henry Ford dreamed or imagined a universal car—a car for the multitude, so to speak—then he had the backbone to make that dream come true.

An overseer or superintendent who can imagine he can see his job running smoothly; who can keep his machinery in first-class shape; who can plan certain jobs so two men will do the work that three men are now doing; who can imagine he sees ways to get more out of machinery by adopting methods that are better than the old methods he has been taught all his life—such big men are waking up to the fact that machinery is cheaper than labor, and those are the kind of men who rise above the crowd.

Reason it out for yourself brother. Just think, only a few years ago if some one had told you that in five years from then you sould sit in your own house and hear a man's voice in New York City as plain as if he were in the room with you—that you could jump in your car and cover 300 miles in one day without much effort—that you would see weavers running 100 looms—that you would see spinners running 30 sides—that you would see speeder hands running eight speeders—well, honest now, wouldn't you have said that fellow is just a pure damphool? Sure you would—but there are thousands of illustrations you can bring up yourself that will show you that if *you* had only had the vision ten years ago—. Those things all look so confounded simple after you see them being done.

Do you begin to see what "Old Timer" is trying to bring out when he says there are more big jobs than there are big men to fill them?

Are you one of the men who always have an excuse to show that any new idea won't work? If you are, then you should get off in a dark corner somewhere and begin to look back over the thousands of things that have been done in the last few years that you *know* would never be done successfully. Why not have an honest-to-goodness, knock-down and drag-out understanding with *yourself* to see what kind of a "bird" you are anyway.

If you run your job better than any other man is running the same kind of job—if you produce more goods for less money than any other overseer or superintendent—don't be afraid no one will find it out brother—the whole textile industry is looking and begging for just such men.

• • •

Nothing of any importance has ever happened in the textile business or any other business without first being born in some man's mind.

That is *Imagination*: and imagination is the greatest asset any overseer or superintendent can have if he will follow up what he can imagine and make the idea materialize.

• • •

Buy something—preferably real estate—a house and lot or a farm—it will help to make a man of you.

The way to get on the wagon to success is to pull more than your share.

• • •

There are ten good jobs where there is one good man.

It is easier to get day labor at $1.50 to $2.00 per day than to get experienced men at $4.00 to $4.50 per day.

There are more $35.00 overseers than there are $60.00 ones.

There are more $5,000.00 superintendents than there are of the $10,000.00 variety. Does not this prove the foregoing statement—that there are more good jobs than good men to fill them?

Prepare yourself for a better job and it will just as surely comes as death and taxes.

The Great Interpreter

Another important factor in the betterment of American business is the enlightened attitude of modern business men toward the helpful service of Modern Accountancy.

Day book and ledger—mute in their dry old pages of yesterday—are alive and eloquent today. Figures are made to talk—talk all the time; and Modern Accountancy is the Great Interpreter.

Progressive Business takes no step without this Great Interpreter. In the Budget "he" lives and guides. His sure and constant hand controls the throttle of costs. His outlook on trade and financial conditions is the basis of the most practical kind of vision.

He analyzes—arranges—coordinates. He balances, stabilizes and compels improvement. Management is *his* steward. He is the material brain of executive control.

Modern Business, and the modern commonwealth, owe much to this Great Interpreter. And the pleasantest thought is that *both* are so willing to listen and so eager to accept his interpretation.

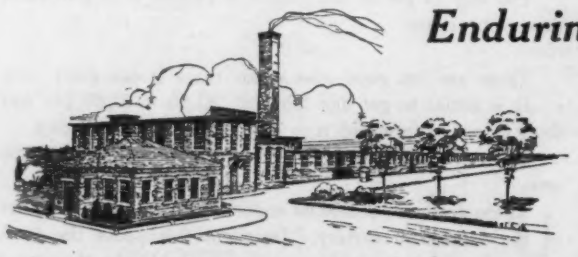
ERNST & ERNST

ACCOUNTANTS AND AUDITORS—SYSTEM SERVICE

NEW YORK	WASHINGTON	CLEVELAND	ATLANTA	ST. LOUIS	CHICAGO	DALLAS
PHILADELPHIA	BUFFALO	AKRON	MIAMI	KANSAS CITY	MILWAUKEE	FORT WORTH
BOSTON	ROCHESTER	CANTON	TAMPA	OMAHA	MINNEAPOLIS	HOUSTON
PROVIDENCE	PITTSBURGH	COLUMBUS	LOUISVILLE	MEMPHIS	ST. PAUL	SAN ANTONIO
BALTIMORE	WHEELING	TOLEDO	NEW ORLEANS	DETROIT	INDIANAPOLIS	WACO
RICHMOND	ERIE	DAYTON	JACKSON	GRAND RAPIDS	DAVENPORT	SAN FRANCISCO
WINSTON-SALEM	YOUNGSTOWN	CINCINNATI		KALAMAZOO	DENVER	LOS ANGELES

ALL KINDS OF
RUBBER COVERED ROLLS
Stowe & Woodward Company

Newton Upper Falls, Mass., U. S. A.



LAMBETH ROPE CORPORATION, NEW BEDFORD, MASS.

Enduring Throughout Days and Days Of Hard Service

Lambeth Spinning Tapes possess the qualities that have made them famous for their durability. These qualities are based on carefully selected raw materials, scientific design and conscientious manufacturing methods.

Carried by all mill supply houses.

Lambeth Spinning Tapes

HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all varieties of Mill Subjects

Finishing Plant Questions.

EDITOR COTTON:

Kindly advise me if hard maple rolls are preferable to a brass roll and rubber roll in a starch mangle for heavy mixes such as stay finishes. Also, if a rubber roll in a Tommy Dodd is as good as hard maple for mixes such as the following:

135 pounds of corn starch; 25 pounds of potato starch; four cans of clay; 12 cans of lime and one pail of softener.

I have been trying to obtain these finishes on range directly onto dry cans without giving the mixture time to set in the cloth. I imagine this process is what has caused the starch to pluck on both the cans and the cloth.

Why is tallow and alum used in some heavy mixes?

CONTRIBUTOR NO. 5234.

A Correction.

EDITOR COTTON:

Will you draw your readers attention to a typographical error in the article "Economy Constants," printed in the March 1927 issue of COTTON, where on page 420, the hours for the *revised* table are shown as 50, whereas they should be shown as 48.

No doubt many, if not most, of the readers have already noticed the error, but for those who have not as yet had time to read the article, it is suggested that they cross out the 50 and write in 48 at early convenience, in order to obviate any confusion which may arise later on.

R. A. SONIAMAN.

Adding to the Value of Cotton.

EDITOR COTTON:

Referring to the inquiry from "O.O. (Pa.)" who asks "Can you advise us where we can find the percentage value added to the price of cotton for its successive stages? For example, with cotton at 14 cents per pound; it is opened, carded, drawn, spun, woven, etc. What has the 14 cents become when the cotton has been opened? Is it worth 15-16-18 or more cents per pound, and so on through the successive operations."

I am going to try to give some light on this subject by considering raw material, waste, and labor. The problem would be very much involved if we tried to divide overhead, such as power costs, for example, and charge the proper amount to each department. "If "O.O." wishes to include overhead he can still use the method and add in overhead costs as has been done with labor costs.

The percentages of waste used in the answer were worked up from weekly reports covering a period of several months. All departments weigh the waste and make weekly reports showing the total of each kind of waste made in that department. The percentages of waste were then calculated as follows:

$$\frac{\text{Total pounds of a certain kind of waste}}{\text{Total cotton opened}} = \text{per cent of waste.}$$

To start our problem, we will assume that the weight of the cotton, at the bale, is 120,000 pounds, and that the cost is 14 cents per pound.

Opening Room.

Then 120,000 pounds opened at 14 cents per pound would be ..... $16,800.00.

Losses in opening room:

Bagging	3.00%
Buckles and ties	1.50%
Motes and dust	1.00%
Total	5.50%

5.50 per cent of 120,000 pounds is 6,600 pounds for the losses in the opening room.

120,000 pounds received
less 6,600 pounds losses

113,400 pounds delivered

Cost to this point	$16,800.00
Labor cost in this dept.	56.00
Total	$16,856.00

$$\frac{\$16{,}856.00 \text{ cost to this point}}{113{,}400 \text{ pounds delivered}} = 14.864 \text{ cents per pound}$$

for the opened cotton.

Picker Room.

Losses in picker room:

Murray cleaning machine	0.40%
Motes, dust, and sweeps	0.75%
Total	1.15%

1.15 per cent of 120,000 pounds is 1,380 pounds for the losses in the picker room.

113,400 pounds received
less 1,380 pounds losses

112,020 pounds delivered.

Cost to this point	$16,856.00
Labor cost in this dept.	150.00
Total	$17,006.00

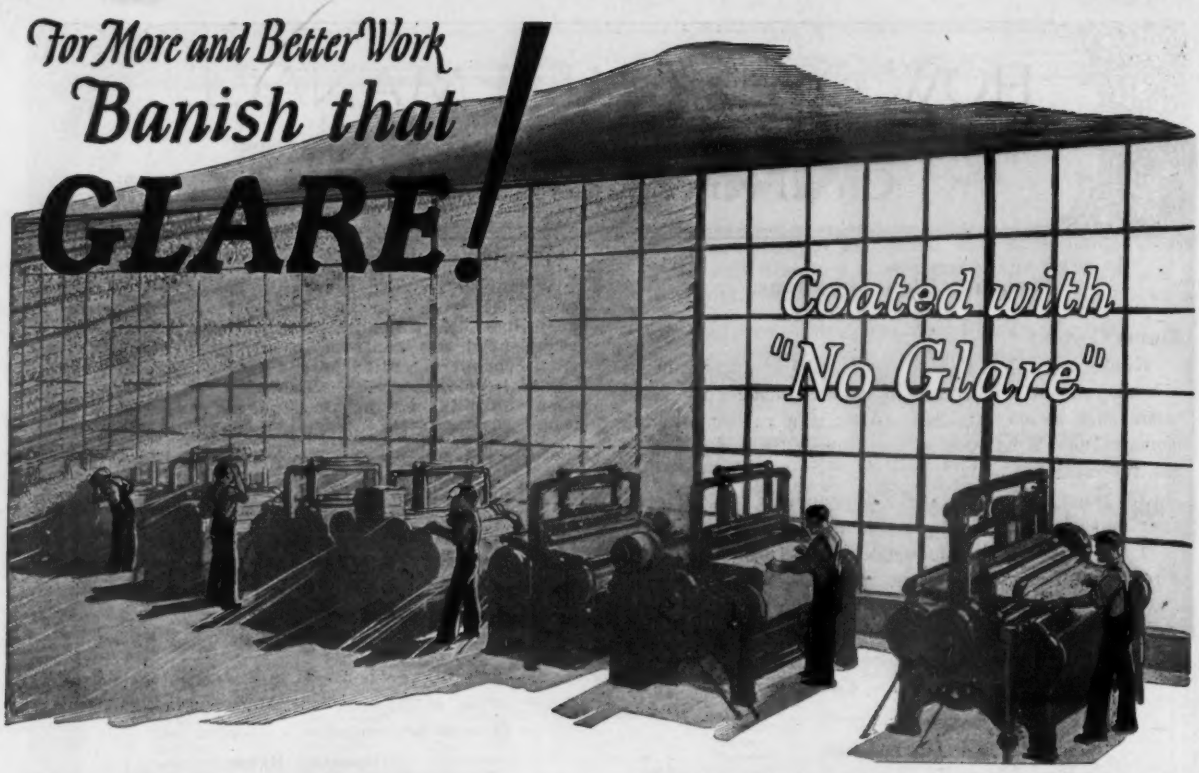
$$\frac{\$17{,}006.00 \text{ cost to this point}}{112{,}020 \text{ pounds delivered}} = 15.181 \text{ cents per pound}$$

for the cotton in lap.

We invite our readers to make use of this department for the discussion of any and all problems arising in the mill or the finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statements of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

For More and Better Work

Banish that GLARE!



Shades Needed Here —a Heavy Expense

MODERN mechanical window shade equipment costs a lot of money these days—both for installation and upkeep (repairs and replacements). Then there's the time workers lose in adjusting them to changing light conditions throughout the day.

All this heavy expense can be avoided by simply coating your glass with *SKYCO No-Glare*. It saves its slight cost many times over in one season, by eliminating this heavy shade expense.

SKYCO No-Glare is a sky-blue liquid that you paint or spray on the glass of your windows and skylights. The resulting film of *No-Glare* FILTERS the intense glaring sunlight, letting in 94% of the light but rejecting *all* of the tiring glare and 15° of the heat (actual thermometer tests).

"No-Glare" Saves Cost of Shades Here

Goes on OUTSIDE of Glass—yet rain or weather conditions do not affect *SKYCO No-Glare*. Neither will it rub, or flake off. Yet you can remove it easily with warm water and a brush. *Just as effective if applied on inside of glass.*

Surprisingly Economical

A single gallon covers from 700 to 800 square feet of glass—*No-Glare* costs less than ½c per square foot of glass coated. One application lasts throughout sun-glare season. Guaranteed by the makers of the famous *SKYBRYTE Glass Cleaner.*

Convenient Trial Offer

Used by textile mills everywhere. Sold by mill supply houses. Order a trial gallon today at $3.50 and try it on a "glary" window.

THE SKYBRYTE COMPANY, 1190 Hanna Bldg., Cleveland, Ohio

CHICAGO BRANCH: 104 So. Michigan Ave.

Reduces Heat 10° to 15° — Yet 94% of Light Maintained

SKYCO NoGlare

Gives a Cool Diffused Light that is Restful

Carding.

Losses at cards:

Strips	2.60%
Motes	0.40%
Flys and sweeps	0.70%
Total	3.70%

3.70 per cent of 120,000 pounds is 4,400 pounds for the losses at the cards.

112,020 pounds received
less 4,440 pounds losses

107,580 pounds delivered.

Cost to this point	$17,006.00
Labor cost in this dept.	300.00
Total	$17,306.00

$17,306.00 cost to this point / 107,580 pounds delivered = 16.087 cents per pound for the card sliver.

Drawing and Fly Frames.

Losses at drawing and fly frams:

Sweeps and fly	0.40%

.40 per cent of 120,000 pounds is 480 pounds for the losses at the drawing and fly frames.

107,580 pounds received
less 480 pounds losses

107,100 pounds delivered

Cost to this point	$17,306.00
Labor cost in this dept.	510.00
Total	$17,816.00

$17,816.00 cost to this point / 107,100 pounds delivered = 16.635 cents per pound for roving.

Spinning Room.

Losses in spinning room:

Sweeps	0.85%
Thread	0.40%
Total	1.25%

1.25 per cent of 120,000 pounds is 1500 pounds for the losses in the spinning room.

107,100 pounds received
less 1,500 pounds losses

105,600 pounds delivered

Cost to this point	$17,816.00
Labor cost in this dept.	2,034.00
Total	$19,850.00

$19,850.00 cost to this point / 105,600 pounds delivered = 18.801 cents per pound for yarn.

Slashing, Warping, and Drawing-in Departments.

One half of total yarn goes through these departments.

Losses in slashing, warping, and drawing-in departments:

Hard waste	$.30%
Soft waste	0.10%
Sweeps	0.03%
Total	0.43%

0.43 per cent of 120,000 pounds is 516 pounds for the losses in the slashing, warping, and drawing-in departments.

52,800 pounds received
less 516 pounds losses

52,284 pounds
plus 4,203 pounds added by the sizing process.

56,487 pounds sized yarn delivered.

Cost to this point (½ of total)	$9,925.00
Labor cost in this dept.	545.00
Cost of starch and greases used	336.25
Total	$10,806.25

$10,806.25 cost of this point / 56,487 pounds of sized yarn delivered = 19.131 cents per pound for drawn warps.

Weave Room.

Losses in weave room:

Sweeps	0.65%
Waste	0.35%
Quill strips	1.90%
Total	2.90%

2.90 per cent of 120,000 pounds is 3480 pounds for the losses in the weave room.

56,487 pounds of sized yarn received
52,800 pounds of soft yarn received

Total 109,287 pounds received
3,480 pounds losses

105,807 pounds delivered

Cost to this point	$ 9,925.00 for soft
	10,806.25 for sized
Total	20,731.25
Labor cost in this dept.	2,830.00
Total	$23,561.25

$23,561.25 cost to this point / 105,807 pounds delivered = 22.268 cents per pound for the woven goods.

I hope to see several answers to this problem. There are many methods of arriving at the cost per pound of roving, yarn, and cloth, and I expect to get some good pointers from others.

W. N. (TENN.)

EDITOR COTTON:

The question of the percentage value added to the price of cotton at each successive stage of manufacture, as brought up by "O.O.(Pa.)" in a recent issue of COTTON, is an interesting one for discussion.

I do not believe that there is any definite percentage which can be applied to all mills. Waste, labor costs, and production are the controlling factors in determining the value of the cotton at each process. Low Middling cotton contains more dirt and leaf than Good Middling. A 25,000-pound production through an opener room will probably cost less per pound than a 15,000-pound production. So each mill must work out its own values.

The method to be used, however, is much the same in each case, and I will try to outline how I would go about it in the hope that "O.O.(Pa.)" and other readers interested may see just how to get at the value.

First, to find the value of cotton which has been through pickers. We will make the following assumptions. Raw cotton, 14 cents a pound. The bagging, ties, and opener and picker waste, would total approximately 6.5 per cent. Thus, the cost of the cotton, less the waste, would be:

$$\frac{14}{100 - 6.5} = 15 \text{ cents per pound.}$$

The picker production is 15,000 pounds, with a payroll of $37.40, which gives a labor cost per pound of 0.25 cent. This payroll includes opening and picking labor, or all labor used on the cotton to get it from the bale through the

That the first machines built by Terrell many years ago are yet being profitably operated by textile mills, is proof of two things . . .

One is that Terrell machines are built to endure. The other is that they continue to fulfill a definite service in a satisfactory manner. Correct performance and design can always be associated with the name, Terrell.

The TERRELL MACHINE CO. Inc.
Mfrs. Jernaco, Utsman, Type K, Etc. Machines
CHARLOTTE, N. C.
General Supply Co. Danielson, Conn.
N.Y. and N. E. Representative.

picker room. Our value so far then, less waste and plus labor, is 15.25 cents. To this, to get an accurate value, must be added a portion of the other manufacturing expense.

Looking over the reports for the last six months, I find these items for the entire plant, a yarn mill:

Electric power	2.10 per pound
Fuel	.20 per pound
Mill Expense	.18 per pound
Repairs	.22 per pound
Supplies	1.00 per pound
Superintendence	.40 per pound
Total	4.00

Now the total average payroll is $1,100. So $37.40 is to $1,100 as the picker portion of overhead is to 4.00 cents, or .133. Thus the value of our cotton, through the pickers, is:

Raw cotton	14.000
Less waste	1.000
Labor	.250
Overhead	.133
Total	15.383 cents

The method of obtaining the value through the cards would be the same.

Raw cotton, 14 cents. The bagging, ties, opener, picker and card room waste would be 12 per cent. Thus, the cotton, less waste; would be:

$$\frac{14}{100 - 12} = 15.9 \text{ cents.}$$

The card production is 14,200 pounds, and the payroll through the cards is $80.00, giving a labor cost per pound of 0.56 cents.

The portion of overhead through the cards would be found in the way used through the pickers. That is $80 is to $1,100 as the card portion of the overhead is to 4.00 cents, or .29. Thus the value of the cotton, through the card, is:

Raw cotton	14.00
Less waste	1.90
Labor	.56
Overhead	.29
Total	16.75 cents.

Passing next to the drawing frames. The total waste would be 12½ per cent. Thus, the cotton, less waste, would be.

$$\frac{14}{100 - 12\frac{1}{2}} = 16.0 \text{ cents.}$$

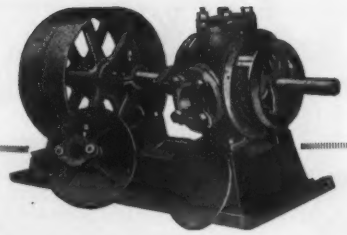
The drawing frame production is 14,000 pounds, with a payroll of $120, giving a labor cost per pound of .857.

The method used to determine overhead is the same. That is, $120 is to $1,100 as the drawing frame portion of the overhead is to 4.00 cents, or .436. This gives a value of cotton per pound, through the drawing, as follows:

Raw cotton	14.000
Less waste	2.000
Labor	.857
Overhead	.436
Total	17.293

Taking up next the roving frames. Here the total waste would increase to 13 per cent. Thus the cotton, less waste, would be:

$$\frac{14}{100 - 13} = 16.100 \text{ cents.}$$



Pump Your Sizing With A BLACKMER Low Speed Rotary Type Pump

It will not beat or churn your sizing! Has positive suction. Doesn't require priming.

The Blackmer Size Pump operates at 430 R.P.M. At this low speed it delivers 50 G.P.M. and will work against 75 lbs. pressure.

The sizing passes thru a Blackmer Pump at a low rate of speed. Most of it is held in suspension during the time it is in the pump. There is no tendency towards churning or beating. And there is no squeezing effect in the operation of the pump.

All parts of Blackmer Size Pumps that come in contact with the sizing are made from acid resistant bronze. All parts that are subject to wear or corrosion can easily be replaced without disturbing the pipe connections to the pump.

These pumps are built on a principle that has lowered industry's pumping costs for 25 years. They take up their own wear automatically. Their design and construction is simplicity itself. There are only five moving parts. No valves—no leathers to cause trouble—no springs—no adjustments of any kind.

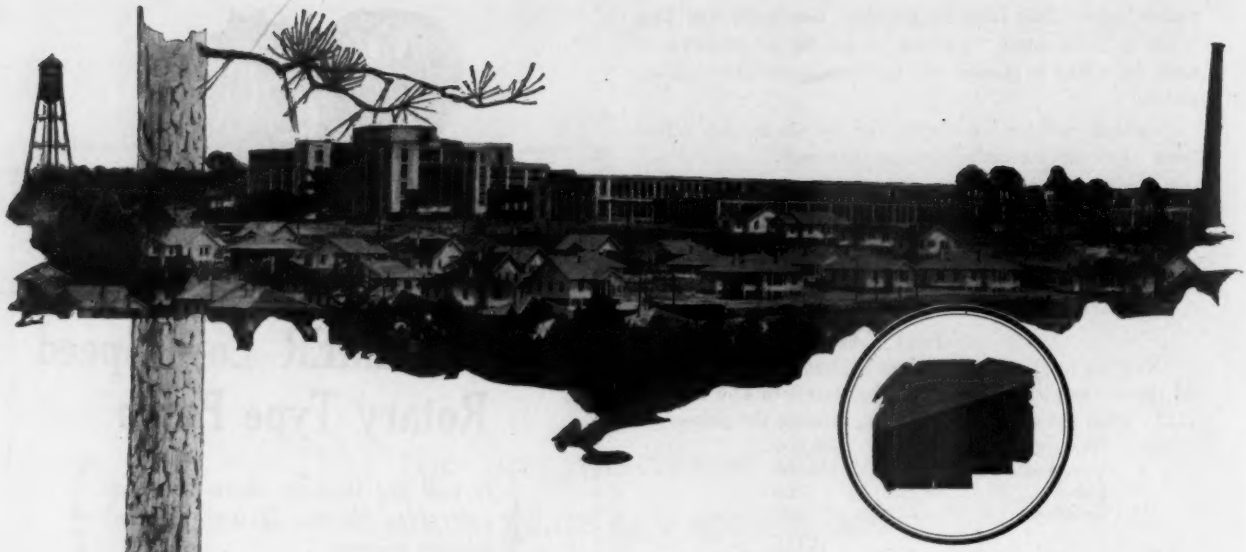
The Blackmer Size Pump will deliver "More Gallons per Dollar" in your slasher room. Ask for information.

Blackmer Pump Co.

1809 Century Ave., Grand Rapids, Mich.

Offices in 18 principal cities.

MORE GALLONS PER DOLLAR



CREO-PINE sub-flooring and timbers have come to be the standard specification of textile architects and engineers for mill construction throughout the South. This is because Creo-pine has proven to be absolutely impervious to "dry rot", the deadly, insidious fungi that attack and destroy untreated sub-flooring and timbers used in mill construction. The destructive force of these fungi is greatly increased by the high humidity that is necessary in textile plants. Creo-pine sub-flooring and timbers are thoroughly impregnated under high pressure with creosote oil, which poisons the food upon which fungi thrive. This deep impregnation of creosote oil in Creo-pine sub-flooring and timbers forms a continuous exterior shell which retains its toxicity or poisonous power under high humidity and continuous service and therefore prevents fungous infection, or "dry rot."

Produced in the heart of the Southern Pine Country

Note: "Creopine" does not mean simply a creosote-treated Southern yellow pine, but it stands for scientific-precision methods of high-pressure impregnation and specialized engineering applied to every separate order. Write our nearest office for full information.

Creo-pine Sub-flooring

Pictured above is the new Pacific Mills at Lyman, South Carolina. Approximately 500,000 feet of Creo-pine sub-flooring and timbers were used in its construction. This mill is typical of many new Southern textile plants for which the architects and engineers have specified Creo-pine.

SOUTHERN WOOD PRESERVING CO.
ATLANTA, GA.

Treating Plants EAST POINT, GA. *and* CHATTANOOGA, TENN.

Sales Offices:

NEW YORK · PHILADELPHIA · PITTSBURG · TOLEDO
CLEVELAND CHARLOTTE, N.C.

The roving frame production is 13,500 pounds, which, with a payroll of $320, would give a labor cost per pound of 2.37.

The overhead is found to be 1.164. That is, $320 is to $1,100 as the roving portion of the overhead is to 4.00, or 1.164. Thus the summary of the roving cost is:

Raw cotton	14.000
Less waste	2.100
Labor	2.370
Overhead	1.164
Total	19.634

Through the spinning, the total waste amounts to 14 per cent. Thus:

$$\frac{14}{100 - 14} = 16.3 \text{ cents.}$$

which represents the value of the cotton less waste.

The production is 12,700 pounds, with a payroll of $600, which gives a labor cost per pound of 4.725 cents, through the spinning. The overhead is 2.18, that is, $600 is to $1,100 as the spinning portion of the overhead is to 4.00 cents. The summary of the spinning is:

Raw cotton	14.000
Less waste	2.300
Labor	4.725
Overhead	2.180
Total	23.205

The next process is spooling, with a total waste of 16 per cent, making the cotton, less waste, equal to:

$$\frac{14}{100 - 16} = 16.700 \text{ cents.}$$

The production is 12,450 pounds, with a total payroll, giving a labor cost through spooling of 6.020 cents. The overhead is 2.728, figured on the same basis as in the preceding processes. Thus the summary through spooling, would be:

Raw cotton	14.000
Less waste	2.700
Labor	6.020
Overhead	2.728
Total	25.448

Through the next process, twisting, the total waste is 17 per cent, making the value of cotton, less waste, 16.9 cents, figured as follows:

$$\frac{14}{100 - 17} = 16.900$$

The production is 12,300 pounds, with a payroll of $900, giving a labor cost through twisting, of 7.32 cents. The overhead is 3.265 cents. The summary of the twisting is:

Raw cotton	14.000
Less waste	2.900
Labor	7.320
Overhead	3.265
Total	27.485

The final process of finishing, making the yarns ready for shipment, brings the total waste up to 18 per cent, making the cotton, or yarn, less waste, worth 17.100, as follows:

$$\frac{14}{100 - 18} = 17.100$$

The production of 12,000 pounds, against the payroll of $1,100, giving a labor cost of 9.160, with an overhead of 4.00. The summary for the finished yarn will be:

LEATHER BELTING

Strictly a Quality Product with the integrity of a responsible organization behind it

Charlotte Leather Belting Company

302 E. th Street

Charlotte, N. C.

Makers of Leather Belting since 1894

Use Acme Products

Save Time and Labor

This Acme Handstitch Staple Binding Machine is used in attaching small tags to clothing, wearing apparel, rugs, carpets and all kinds of merchandise without mutilating the fabric. Made of light weight metal (weight 36 oz.) and can be carried from one pile of merchandise to another.

We also make many special models for different uses; such as Staple Binders for fastening envelopes, letters, invoices and other documents. They work accurately, quickly and faultlessly and save time, labor and trouble.

THE ACME STAPLE BINDER is the only Staple Binding Machine Designed, Manufactured and Distributed from its own factory.

We guarantee our Products—Send for Catalogue

ACME STAPLE CO., Camden, N. J.

GDC

For fine quality in dyestuffs
look to G D C

Reliance upon the ability of G D C to produce dyestuffs of unusual quality is not misplaced.

This characteristic of G D C service is of great practical value to textile manufacturers. It insures the most attractive effects without disappointing and costly experimentation.

The proven merit of these dyestuffs qualifies them for *your* production.

NEW YORK, 230 Fifth Avenue

BOSTON
159 High Street

CHICAGO
305 W. Randolph Street

SAN FRANCISCO
22 Natoma Street

PHILADELPHIA
111 Arch Street

PROVIDENCE, R. I.
40 Fountain Street

CHARLOTTE, N. C.
220 W. 1st Street

GENERAL DYESTUFF CORPORATION

Raw cotton	14.000
Less waste	3.100
Labor	9.160
Overhead	4.000
Total	30.260

Briefly, my rule for finding the value of the cotton at any given process is: Divide the price of raw cotton by 100 less the total waste through the given process. This gives the value of the cotton less the waste cost. To this, add the per pound labor cost through the given process and the proper proportion of overhead or burden. The sum is the value of the cotton at that process.

It is interesting to note that the waste item in these figures shows over twice the labor plus the overhead. I wonder if it pays to use the very low grades of cotton, which not only contain more waste, but make the work run so badly?

S. S. (N. C.)

Adjusting Picker Evener Motions.

EDITOR COTTON:

On the Atherton picker evener, there is a thumb-screw at the top which is for the lap adjustment. Also, at the very bottom, of this evener motion, is a turn-screw with a lock-nut on it, which is called the "adjusting screw for scale motion."

Will some of your readers discuss and explain this and other features of this evener motion, with which I am not very familiar, giving full explanation and information that would help. What does "Wash" have to offer?

W.H.T. (MASS.)

A Cold Paste for Scavenger Rolls.

EDITOR COTTON:

Responding to "Contributor No. 523" who desires a cold paste to use in covering scavenger rolls, I would suggest the following:

To fine wheat flour add water and bring to the point of boiling. Stir this until the paste thickens, then add, a little at a time, finely powdered pitch, (or rosin) combined. Set aside to be used hot or cold as desired, but it is best used cold. The result is a thick paste. A few drops of carbolic acid will preserve the paste. This paste will dry in about three hours after it is applied.

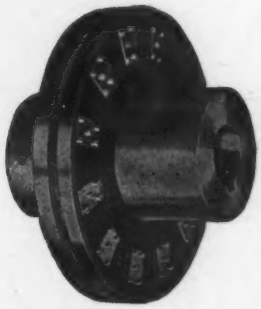
J. R. W. (N. C.)

EDITOR COTTON:

I note the inquiry of "Contributor No. 523" for a cold paste or glue for covering scavenger rolls. I do not remember ever seeing a cold glue used. We use hot glue. I should think, however, that something on the order of Le Page's liquid glue, would be all right. There is a cold water glue which comes in powder form, and which is being used a great deal by lumber mills and furniture factories and which we use here at the mill for certain jobs of wood work. It is called Casco Waterproofing Glue and is made by Casein Manufacturing Company of Atlanta, Ga. We also use a white powder for making a cold paste for sticking labels on cloth, called "Steck-O". This is made by the Clark Paper and Manufacturing Company, Rochester, N. Y.

Neither of these compounds is very expensive and

For Direct Connecting Motors to Spinning and Twisting Frames



Over 100,000 in Use

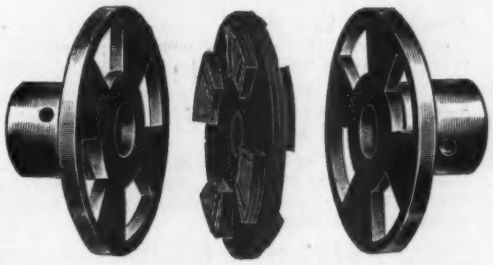
Grundy Couplings are designed to render the utmost in service on all direct drives. They are made according to specifications determined by an analysis of the textile industry. They are made in a variety of sizes, working on any direct drive—with fewer repairs and less attention than any other coupling on the market. Thousands of these couplings are at present in use in various Textile Mills throughout the country. Illustrated folder showing the "Grundy" actually driving Spinning and Twisting Frames will be forwarded upon request.

The following salient features should soon prove to you why

Grundy Patent Flexible Insulated Coupling

should harness your direct drives:

1. Takes care of uneven strains.
2. Self-adjustment insures perfect alignment of shafts.
3. Can be used whether insulation is required or not.
4. Perfectly balanced, and adapted for revolving at high speeds.
5. Runs in either direction; is close connected; easy of access; practically no repairs.
6. There are no projections to cause damage.
7. Maintains a positive and silent drive; free from objectionable hammer action features.



Cast Iron Leather Cast Iron

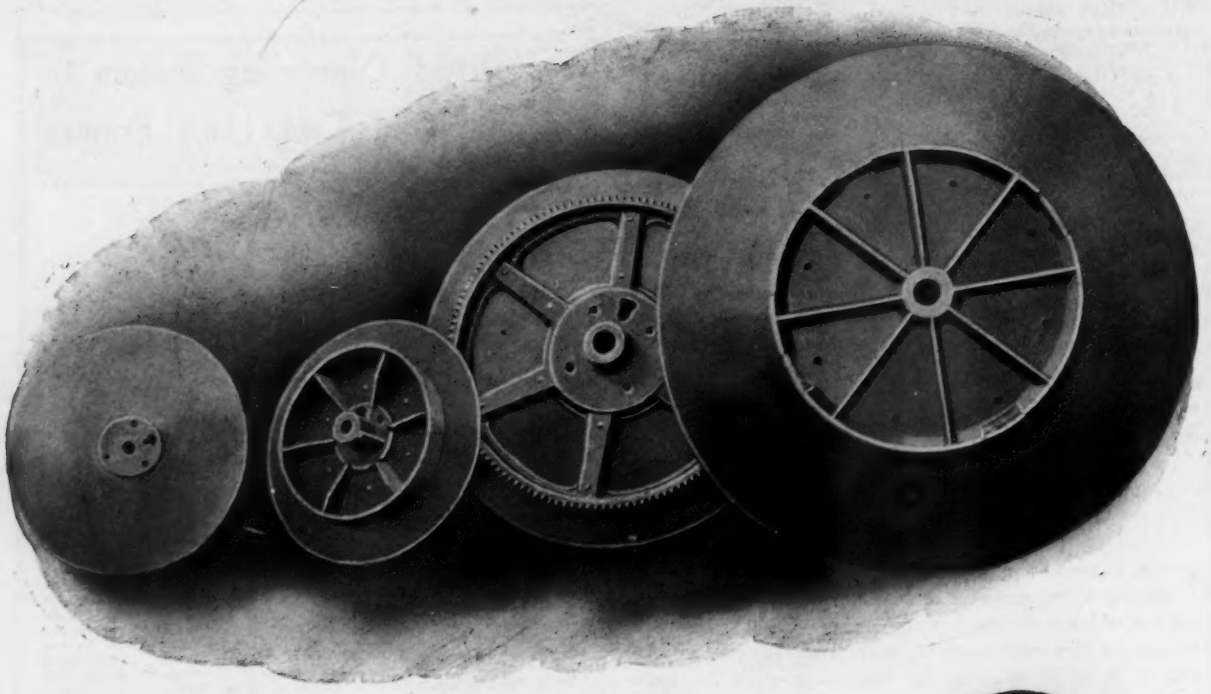
Write for Booklet "F"

Manufactured exclusively by

CHARLES Bond COMPANY

Leather Curriers, Importers and Belting Manufacturers

617 Arch Street, Philadelphia, Pa.



Steel Beam Heads That Run Absolutely True

mean elimination of many seconds

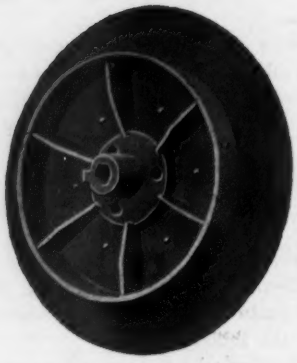
ONE of the most discouraging problems that textile mills have to face is the selecting of beam heads. This problem will never again cause worry in your plant if you once install the new Etchison Steel Beam Heads.

Already they have gained warm recognition in many of the nation's foremost mills. This wide acceptance is a result of five years' thorough testing and usage under all conditions.

Etchison Beam Heads fully eliminate seconds and unnecessary loss of yarn, allowing filling of beam with perfect uniformity—and assuring perfect selvedges.

They are made of special carbon steel discs with a hub of cast iron *riveted* onto the head. There is no warping as when hubs are welded—but perfect balance for true running is maintained throughout its long life.

There is no item of upkeep. Made in all sizes and types for warper and loom beams with friction or gear or both. Fully covered by patents. Reasonably priced. Write for information today.



Notice how the ribs come up flush with the brake band on the Etchison. This eliminates breakage and assures extremely long life. Your junk pile (illustrated below) will become a thing of the past if you install Etchison.

Manufactured exclusively by:

WEST POINT IRON WORKS

WEST POINT, GA.

ETCHISON

Patent Steel

BEAM HEADS

any of them might do. I do not know, as I have never tried them.

N. C. (GA.)

Trouble in Sizing Ball Warps.

EDITOR COTTON:

In a recent issue one of your contributors presented a problem of sizing ball warps. He stated that the difficulty was with his white warps, since he says the colored warps come off all right.

It occurs to me that possibly the colored warps are made on a different warper than the white warps, and I suggest that the warpers be gone over very carefully to see that the same tension is used on all the yarns. Frequently the skewers that hold the spools on the warper become worn and cause the yarn on some of the spools to have more tension than on the others, and if so this would have a tendency to cause slack yarns to appear after sizing.

It is also possible that the creel is not level and one side of the warp receives more tension on the yarn than the other, and this would also cause slack yarn.

If the warps were properly made there should be no trouble during the sizing and drying.

B. P. (GA.)

Desires Quill Breakage Figures.

EDITOR COTTON:

We are running 160 looms on a three up, one down, common twill weave. The number of filling used varies from 3 3/4s to 11s. The average number is 5s. The looms make 150 picks per minute. They are Hopedale automatics with a lay 4-inches shorter than standard. The looms are about four years old. We use 8 3/4-inch Draper quills. The breakage varies from 75 to 100 quills per day, which we think is excessive. We would like if possible, to have some comparative figures on this and suggestions as to how to cut this breakage to a minimum.

CONTRIBUTOR No. 2017.

Textile Schools and Cloth Finishing.

John A. Simmons, superintendent of the Lanett Bleachery & Dye Works, Lanett, Ala., discussed the textile school question from the viewpoint of the finishing industry, at the Cotton Manufacturers Association of Georgia convention in Atlanta in April. His remarks represent the thoughts of a graduate of the Georgia School of Technology, and while his specific remarks refer to that institution, they are applicable to all textile schools. Furthermore, the latter part of his paper was devoted to a discussion of cooperation between mills and finishing plants, covering some technical phases, and is therefore being published separately in the discussion department. Mr. Simmons said in part:

A few days ago B. C. Forbes said, "Is it not high time that our schools and colleges and universities made an honest effort to bring home to boys and youths some understanding of the economic realities of life? It is a tragic fact that thousands and thousands, even of college graduates, face the world without giving the slightest thought as to how they intend to earn their existence, without the

Repeat Orders Prove
the 100% satisfaction of the
"Centrif-Air"
Adjustable Cotton Cleaning System

Which is unconditionally guaranteed:

1—Not to curl or damage cotton as it goes through the machine.
2—To remove more light leaf than any other machine made.
3—To free cotton from metal, rocks, glass, heavy seed and all hard materials, heavier than the staple itself.
4—To have a lower fire hazard than any other cleaner in the world, for Centrif-Air is built with BRONZE BLADES which can not produce sparks as metal or other hard materials are delivered to it with the cotton.

The Centrif-Air Machine Co. Inc.
Atlanta **Georgia**

Plan Before Planting

Attractive home grounds are the result of well-considered effort. Trees and shrubs selected haphazard and hurriedly, or bought in generalized collections, never produce the satisfactory effects achieved by a well-thought-out planting plan.

Careful Planning Pays

Our skilled Service Department can achieve more permanent beauty with a few well-grown, well-selected plants than unskillful persons with twice as many; both labor and material costs are saved.

Our guarantee to replace at the nursery, the trees that die within a year protects the investment. Our stock gives satisfaction.

Send for us at once. Let us plan in summer for planting in the fall. A letter, telegram or telephone call will bring our representative.

THE HOWARD-HICKORY CO.
Nurserymen and Landscape Gardeners
Hickory, N. C.

TOLHURST 75TH ANNIVERSARY

Showing installation of Tolhurst Extractors in Standard Silk Dyeing Co.'s Plant, Paterson, N. J.

The Tolhurst not only handles more work per day, but turns it out quickly, safely, surely—with pleasing freedom from shut-downs and repairs. Also, the specialized effort which makes possible this remarkable production unit insures that precision in design and construction which adds years of service to the life of the machine.

TOLHURST
REG. U.S. PAT. OFF.
CENTRIFUGAL
EXTRACTORS

© TOLHURST MACHINE WORKS ESTABLISHED 1852, TROY, N.Y.

Western Representatives:
JOHN S. GAGE,
8 South Dearborn St., Chicago, Ill.

San Francisco Representative:
B. M. PILHASHY,
Merchants Exchange Bldg.,
San Francisco, Cal.

DESIGNED AND BUILT BY SPECIALISTS
1852 1927

NEW YORK OFFICE, 30 CHURCH ST.

Southern Representative:
FRED H. WHITE,
Independence Bldg., Charlotte, N. C.

Canadian Representative:
W. J. WESTAWAY CO.,
Westaway Bldg., Hamilton, Ont.
275 Craig West, Montreal, P. Q.

slightest thought as to what line of life they would like to follow, and often they have the most fantastic notions as to the salary the world should be eager to pay them."

This is right in line with the work that Georgia Tech is attempting to do. The charge is often brought against graduates, not only of this school, but practically all other textiles schools, that the men when they go out are not willing to go in the mill as an ordinary laborer for experience, but want the overseer's or the assistant superintendent's place right from the jump. If the instructors had more time for personal contact with the boy and explain what he would have to do in order to make any progress in the textile field, this point could be very readily overcome to an extent. • • •

I understand there is some agitation among the students to cut down on the amount of chemistry that is given in the textile course. This, in my opinion, would be a very sad mistake. Instead of cutting down on the chemistry this should be enlarged. It makes no difference whether the boy is going into a finishing plant or a mill—chemistry is very essential and unless the boy has the right start, he will not be able to handle the problems that might come up. Take, for instance, the weaving mill. In the slasher room there are very few people capable of determining whether a softener is doing the proper work it should do for the amount of money paid for it, and a good many mills are losing quite a little money due to the softener they are using in the sizing. In our own place we have seen softeners that would do identically the same work with a variation of as much as three cents per pound in the price. Sizings are also used by a good many mills that contain a great deal of unsaponified fatty or mineral oil, and the boy that leaves any textile school should be able to definitely determine whether the softener will do a given job without leaving unsaponified or mineral oils in the size mixture.

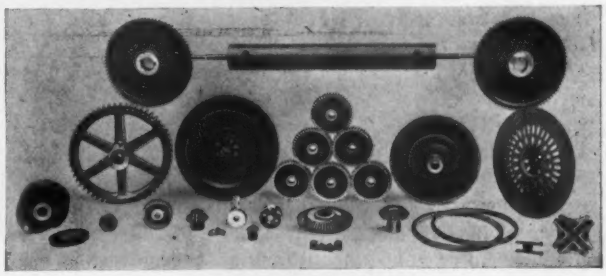
Cloth containing these spots as a result of this unsaponified fatty or mineral oil is less valuable than that which does not contain them, because it hinders considerably the finishing qualities of this cloth. A good many sizing compounds also contain magnesium and calcium chloride, which is very dangerous to use on any cloth to be finished, especially if signed as the heat from the singers will break the cholrides up into hydrochloric acid, which tenders the cloth, and unless the cloth is finished with the end of first-class quality in view, it has necessarily deteriorated in value, and the mill accordingly loses money. For the boy going into the finishing industry, chemistry is the most essential subject he can possibly take up, as practically every operation depends on some chemical reaction.

This school is hoping the time will come when it can install a straight chemistry and dyeing course, which would lead more to the finishing field than to the cotton mill. A great many of you are interested in this, especially those doing dyeing, because unfortunately, dyeing and finishing is a comparatively recent development in the South, and all of the plants have to train their own men and always have a man ready to step in should they lose one. If you lose a carder or a spinner, due to the number of mills, it is a comparatively easy matter to go out and hire a new man to fill his job. In the case of dyeing and finishing the job is not quite so simple, because the number of men in the South qualified to handle these positions are comparatively few, it is almost impossible to hire those who are qualified, because if a plant has a satisfactory man they will

TEXTILE MACHINERY PARTS

LOOM BEAMS GEARS
INSPECTING MACHINES
WASH MILLS
SQUEEZE MACHINES
DYE MACHINES
DYE AND STARCH KETTLES

BRIGGS-SHAFFNER CO.
Winston-Salem, N. C.



DIXON'S GRAPHITE PAINTS

Better and longer protection as well as lower cost per year of service are direct results of its use.

The pigment, flake silica-graphite, is unusual in its durability and water-repellent qualities. Being of flake formation it expands and contracts with temperature variation without cracking or peeling.

Write for new color cards No. 34-B showing colors of Aluminum and Light Gray.

JOSEPH DIXON CRUCIBLE COMPANY
Jersey City, New Jersey
1827—*ONE HUNDREDTH ANNIVERSARY*—1927

not let him go for the sake of a few dollars a week. If a job along this line is to be handled satisfactorily the man must have chemistry and general engineering.

At the present time we have five men from Georgia Tech at our plant and they are all doing excellent work Our biggest job, at the beginning, was to convince them that they should get down to bed rock on as friendly terms as possible with the men in the plant, because this is where the majority of the information is received, and if the textile school can instill in the boy that the majority of information and knowledge that he can get in the mill will come not so much from the overseer, but from the men actually running the machines, they will have accomplished a good work. The overseers usually have other things before them, and do not have time to devote to these boys, and they are turned loose to shift more or less for themselves.

Cooperation Between Mill and Finisher.

While we are on this subject of the finishing industry, I want to appeal for closer cooperation between the mills and the finishing plants, regardless of who is doing the finishing. A good many years back the mills and finishing plants were more or less at loggerheads, and each one tried to pass the trouble that developed onto the other. This condition has been materially remedied, and the majority of the mills are cooperating with the finishing plants very closely, realizing that it is to their advantage to do so. The finisher has his problems and his own troubles but a good many times these troubles can be remedied by close cooperation with the mill, and especially is this true among southern finishing plants and mills, because your product, unless it is properly finished, regardless of the fact that it may be the best product on the market will be a second if not handled right by the finisher. On the other hand, a finisher cannot take a piece of cloth that is made wrong for the purpose intended and give a first quality piece of goods.

I believe the problem of the manufacture of cloth in the South is well solved and well handled, but unless by cooperating with the finishers this cloth can be finished right, you are at a handicap in merchandising the finished article, and the more boys from textile schools who can be worked up in the mills and finishing plants with a vision as to the possibilities of southern manufacture and southern finishing we feel the better cooperation will exist between the two branches of the industry.

I might here point out a few defects that exist in cloth which hinder the finishing, especially if the goods are to be dyed with any kind of sulphur colors, which is the class of work the majority of the goods manufactured in this State go into, unless they are used in the gray. A piece of cloth rolled up over a rolling machine or going through brushers in a wrinkled condition will leave a very marked streak after dyeing. A small oil spot that has been washed out with some of the so-called oil removers only makes bad matters worse and in place of the small spot you have a large spot over the entire area the cloth has been rubbed. A piece of cloth made with a wire selvage is almost impossible to handle over any process of continuous dyeing, due to the selvage rolling and curling in process. The same trouble will be encountered on a piece of cloth made with a very slack selvage. A piece of cloth made for napping with an end out or any long filling float is going to leave a hole in the cloth, due to the fact that the napper is going to dig in a little heavier at this point than it would on the rest of the cloth. The condensation in the weave room dripping down on the warps and finished cloth is going to leave this same spot after the goods are dyed and not bleached.

What Makes Warp Streaks in Plain Fabrics?

EDITOR COTTON:

I would like to have some discussion on streaks in plain goods fabrics, *warp way* of cloth, as to the causes and remedies, especially from the weaving standpoint.

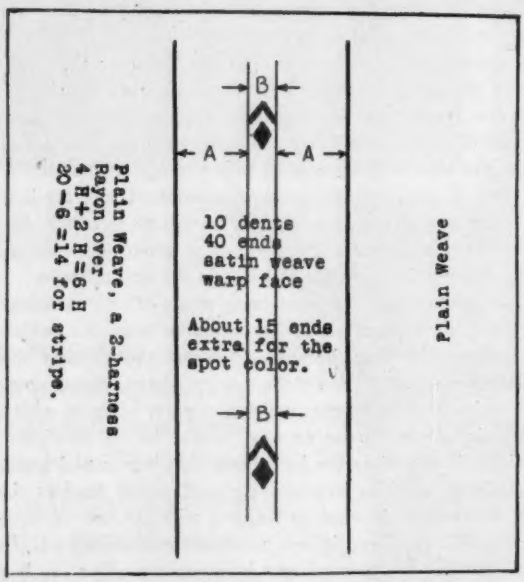
CONTRIBUTOR No. 663.

Answers Question on Designing.

EDITOR COTTON:

This letter is being written in the hope that it may be of service to "Contributor No. 1041." I have lettered the drawing after dividing it into three sections. The sections marked "A" will be drawn on one set of harness and will weave warp flush throughout.

The middle section marked "B" will be drawn on another set of harnesses and will weave warp flush along



with the ends in "A" sections until ready to weave the spot. Then the "A" ends continue warp flush, but the "B" ends are made to weave filling flush until the spot is made. Then they resume their warp flush weaving.

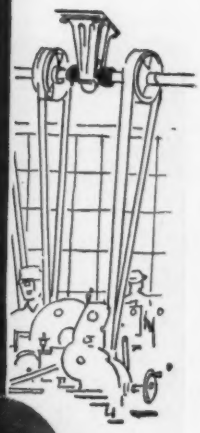
If this is not clear, tell "Contirbutor No. 1041" to come again.

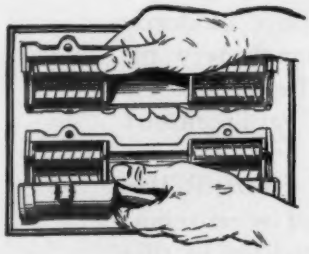
F. F. (N. C.)

New Distributors Appointed.

The Daly Rayon Service, 44 East 23rd St., New York City, have been appointed exclusive sales representatives in New York State for Rayonese, the new multi-filament supersoft rayon. This is a domestic production and is available in skein or cone form. According to the new distributors, it has a subdued luster, and is particularly suitable for hosiery and underwear as well as woven fabrics where softness is desired.

Only HYATT can give you *all these advantages*





Modernize your transmission line, quickly, economically, and permanently.

Split—for easy installation. Hyatt Line Shaft Bearings can be installed without tearing shafting, pulleys, or hangers down. The bearings, and their boxes, are furnished split so they can be placed around the shaft in a few minutes' time.

Assures 15% power saving. The full line contact of the Hyatt rollers prevents overloading, reduces friction, and saves 15% of your total power bill. Lubrication is required only three or four times a year—cutting grease and labor costs 85%.

Fits all hangers. The Hyatt is narrow enough at the center to fit all hangers, size for size. A small wrench is the only tool needed. No other line shaft bearing is of such convenient design.

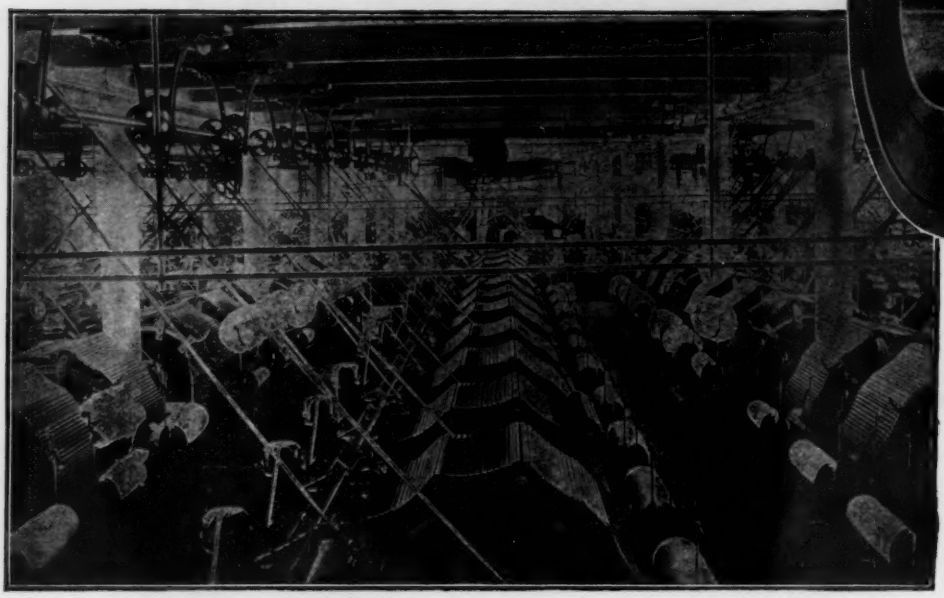
36 years' experience. No other line shaft bearing has 36 years of successful bearing manufacturing experience behind it. Many of the first Hyatts made are still performing faithfully in a variety of industrial applications.

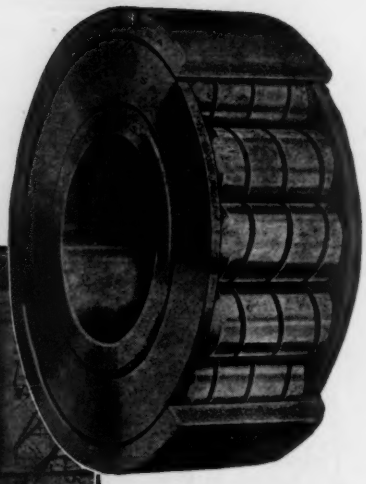
A product of General Motors. No other line shaft bearing has General Motors with its tremendous resources and engineering facilities behind it.

HYATT ROLLER BEARING COMPANY
NEWARK, NEW JERSEY
Pacific Coast Address: OAKLAND, CAL.

HYATT
ROLLER BEARINGS
PRODUCT OF GENERAL MOTORS

Longer Lived Bearings for Preparatory Machinery





Hyatts on cards and line shafts pyramid power savings. Lint cannot harm them, for their housings are oil tight.

Hyatt Line Shaft Bearings save 15% of your total power bill.

GREAT success with Hyatt Roller Bearings in spinning frames, twisters, looms and finishing machinery first induced many mill owners to specify Hyatts for all their preparatory machinery.

Substantial power savings, smoother operation, permanent freedom from bearing repairs and replacements, and greater general bearing satisfaction accompany each installation.

Although a majority of Hyatt applications are for new equipment, a great many mills have modernized their present machinery by applying Hyatt bearings in specially designed replacement housings.

The long life of Hyatt Roller Bearings is guaranteed by an organization that has specialized in this one product for 36 years. When you are ready to modernize your equipment—let Hyatt engineers make the recommendations.

HYATT ROLLER BEARING COMPANY

Newark Detroit Chicago Pittsburgh
Worcester Philadelphia Oakland Cleveland

HYATT

ROLLER BEARINGS

PRODUCT OF GENERAL MOTORS

A Yarn Mill Layout.

EDITOR COTTON:

The accompanying tables will give you a lay-out for a 25,000-spindle yarn mill, divided equally between 50s warp and 70s filling—that is, 12,500 spindles on warp and 12,500 spindles on filling. This information was requested by "Contributor No. 2719" in your May issue, who said he wanted figures showing the number of machines, together with the weights of stock, etc. He added that he did not wish to run the combers more than 90 to 100 nips per minute.

I think the tables herewith will give all of the information which might be required in connection with a question making these specifications. In Table A I am showing the specifications for each process for 50s warp, showing the pounds produced, the waste percentage, the weight of stock, r.p.m. of front roll, pounds required per day, the per spindle or delivery production per day, and the number of spindles or deliveries required, for each process.

In Table B I give the same information with reference to the processes involved in making the 70s filling.

The total amount of machinery required for the entire mill, including the 12,500 spindles on warp and the 12,500 spindles on filling, is shown in Table C which gives the total pounds, the total spindles, the spindles or deliveries per frame, and the number of frames or machines required for each process in the mill.

Following is general information, relating to the spinning, such as twist base, turns per inch, spindle speed, etc., for the 50s warp and also for the 70s filling:

CALCULATIONS FOR PREPARATORY MACHINERY FOR 50s WARP.

Process	Pounds Produced	Per Cent Waste	Hank Roving Grains Sliver	R.P.M. Front Roll	Pounds Per Day Required	Pounds Per Spindle or Delivery	No. Spindles or Deliveries Required
Spinning	1,350	1.0	50s	93	1,350	.108	12,500
Jacks	1,363	.3	12	82	1,363	.42	3,245
2nd Intermediates	1,367	.3	4	138	1,367	2.08	657
1st Intermediates	1,371	.4	1.50	155	1,371	6.82	201
Slubbers	1,376	.5	.60	177	1,376	17.2	80
2nd Drawing	1,383	.5	60 gr.	210	1,383	103.7	14
1st Drawing	1,383		56 gr.	210	1,383	96.8	15
Combers	1,390	14.0	51 gr.	85 nips	1,390	15.3	9
Ribbon Lappers	1,616	.5	660 gr.	57 (**)	1,616	1266	2
Sliver Lappers	1,616		625 gr.	75 (**)	1,616	1315	2
Cards	1,624	5.	45 gr.		1,624	55	30
Finisher Pickers	1,708	2.	10.7 oz.		1,708	2000	1
Breaker Pickers	1,708		12 oz.		1,708	2000	1
Bale Breaker	1,742	7.(*)			1,742		1
Bale Form	1,873						

(*)—Tare and Moisture.
(**)—5-inch Calender Roll.

TABLE A.

CALCULATIONS FOR PREPARATORY MACHINERY FOR 70s FILLING.

Process	Pounds Produced	Per Cent Waste	Hank Roving Grains Sliver	R.P.M. Front Roll	Pounds Per Day Required	Pounds Per Spindle or Delivery	No. Spindles or Deliveries Required
Spinning	987	1.0	70s	93	987	.079	12.500
Jacks	997	.3	13	83	997	.4	2.493
2nd Intermediates	1,000	.3	4	138	1,000	2.08	481
1st Intermediates	1,003	.4	1.50	155	1,003	6.82	148
Slubbers	1,007	.5	.60	177	1,007	17.2	59
2nd Drawing	1,012	.5	60 gr.	210	1,012	103.7	10
1st Drawing	1,012		56 gr.	210	1,012	96.8	11
Combers	1,017	16.	51 gr.	85 nips	1,017	153	7
Ribbon Lappers	1,211	.5	660 gr.	57	1,211	1266	1
Sliver Lappers	1,211		625 gr.	75	1,211	1315	1
Cards	1,217	5.	45 gr.		1,217	55	22
Finisher Pickers	1,281	2.	10.7 oz.		1,281	2000	1
Breaker Pickers	1,281		12 oz.		1,281	2000	1
Bale Breaker	1,307	7.(*)					
Bale Form	1,405						

(*)—Tare and Moisture.

TABLE B.

TOTAL MACHINERY FOR 50s WARP AND 70s FILLING

Process	Total pounds	Total Spindles or deliveries	Spindles or deliveries per frame	No. of frames required
Spinning	2,337	25,000	252	100
Jacks	2,360	5,738	224	26
2nd Interm.	2,367	1,138	150	8
1st Interm.	2,374	349	120	3
Slubbers	2,383	139	72	2
2nd Drawing	2,395	24	4	6
1st Drawing	2,395	26	4	7
Combers	2,407	16		16
Sliver Lappers	2,827	3		3
Ribbon Lappers	2,827	3		3
Cards	2,841	52		56(*)
Fin. Pickers	2,989	2		2
Brk. Pickers	2,989	2		2
Bale Breaker	3,049	1		1

(*) Note: 4 cards to be stopped at all times for grinding and setting.

TABLE C.

50s WARP

Spinning twist base	4.60
Turns per inch	32.52
Spindle speed	9,500
R.P.M. front roll	93
Pounds per spindle per day of 10 hours, actual	.108
Pounds produced on 12,500 spindles, 10 hours	1,350

70s FILLING

Twist base	3.20
Turns per inch	26.75
Spindle speed	7,800
R.P.M. front roll	93
Pounds per spindle per day, 10 hours, actual	.079
Pounds produced on 12,500 spindles, 10 hours	987

CONTRIBUTOR No. 1512.

EDITOR COTTON:

I note in the May issue the inquiry of "Contributor No. 2719" for a mill lay-out for a 25,000-spindle yarn mill divided equally in 50s warp and 70s filling. I will give below a lay-out on which he can produce 4,000 pounds per day:

Two breaker pickers, 50-pound laps; four finisher pickers, 43-pound laps; 70 cards, 48-grain sliver; four sliver lap machines, 400-grain sliver; four ribbon lap machines,

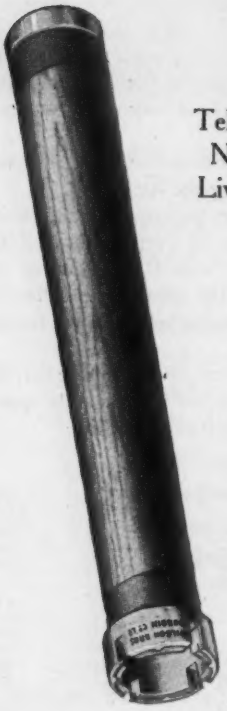
WILSON BROTHERS BOBBIN Co LTD

BOBBINS & SHUTTLES

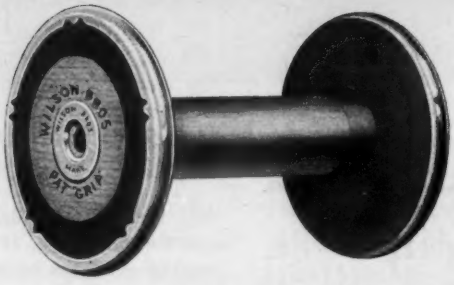
for the TEXTILE TRADE

TRADE MARK WB

TRADE MARK WB



Telegrams
Nugget
Liverpool



Codes
A.B.C. A. 1
& Marconi

Awarded
68 Gold Medals and Diplomas
8 Grands Prix

CARDROOM TUBES,
RING BOBBINS,
WINDING BOBBINS
PIRNS, &c., &c.

Largest Makers in the World.

WILSON BROS. BOBBIN CO., Ltd.

& at Todmorden

Garston, LIVERPOOL,
ENGLAND

AGENTS: LEIGH AND BUTLER, BOSTON, MASS., U. S. A.

500-grain sliver; three slubbers (54-spindle, 11 x 5½), .056-hank; 30 combers, 48-grain sliver; 12 drawing (six deliveries per frame), 55-grain sliver; four intermediates (120-spindles, 9 x 4½), 1.20-hank roving; ten roving frames, 8 x 4, 3.20 and 2.90-hank roving; 30 jack frames, 7x3, 9.20 and 11.20-hank roving.

F. O. (S. C.)

A Twister Problem.

EDITOR COTTON:

On page 569 of the April issue of COTTON, "O.O.(Pa.)", in the last paragraph of his letter, takes up a subject in which I am interested. I regret that I, myself, have no information to pass on, but hope that someone who is qualified, will take this matter up, and give us some helpful data.

I am twisting for thread yarns some 36/3 Sakellarides. Spinning twist is four times the square root. In twisting five times the square, the yarn after twisting snarls up and is altogether too lively. I am wondering if this fault is in the cotton itself. My twister is a 2½-inch ring Fales and Jenks. We used a No. 14 American bronze traveler. Rings are in plate holder. Use wet twist. We recently started using a No. 13 traveler, which to my way of thinking is much too heavy, and the heavier traveler does not seem to take the liveliness out of the yarn.

I should like to know if some contributor can help me.

CONTRIBUTOR No. 173.

Average Percentage of Seconds or Shorts on Osnaburgs.

EDITOR COTTON:

Replying to "Contributor No. 603" with reference to what per cent of seconds is permissible in weaving osnaburgs from low grade cotton, it is my understanding as well as experience, that ¾ to 1 per cent is considered good weaving and is permissible on the class of goods referred to.

CONTRIBUTOR No. 917.

EDITOR COTTON:

Replying to "Contributor No. 603" I am giving you the percentages of seconds averaged by several mills on various constructions of osnaburgs. These should give him an idea as to whether or not he is in line.

Mill A. 30-inch, 7-ounce osnaburg, average from ½ of one per cent to 1¼ per cent. 36-inch, 7-ounce osnaburg, average ¾ of one per cent to 1½ per cent.

Mill B. 1¼ per cent for 30-inch, 7-ounce.

Mill C. One to two per cent 36-inch osnaburg, 3.60 to 4.00 yards to the pound.

Mill D. 30-inch, 7-ounce osnaburg, 1½ to 2 per cent. 36-inch osnaburg, 7-ounce, 2 to 2½ per cent.

Of course, as you know, the custom in all mills making bagging cloth is to establish strength first, and the grading of osnaburg, outside the matter of strength, is not as particular as print cloths or sheetings, because when these are used in bag goods they are generally bleached and backfilled which makes up the strength to the standard required by the Interstate Freight Bureau.

It is worth noting also that the amount of seconds is covered, more or less, by the ruggedness of the cotton used

Why You May Expect More
FROM
Mi CLEANSER
TEXTILE MILL SCRUBBING POWDER

Seventeen years developing one product for one purpose—the use of materials that have no equal for mill scrubbing—a price made possible by direct delivery—and immediate shipment of every order.

Our Guarantee
If any shipment of Mi Cleanser is not satisfactory in every respect, you will owe us nothing on same.

Mfg. and Sold by
THE DENISON MFG. CO.
ASHEVILLE, N. C.

Your Order Is Shipped the Day It Reaches Us.

GARLAND

IT IS THE GARLAND
STANDARD of
INSPECTION
That means a
Perfect Loom Harness

The final inspection which each one of our loom harnesses receives when finished is so thorough and critical that every harness which we send out may be depended upon as being as near perfect as it is possible to make it.

G
TRADE MARK

GARLAND MFG. CO.
SACO, MAINE

Power

A NEW INDUSTRIAL EMPIRE is being opened up in Southwest Georgia. The electric service enterprises throughout an area embracing more than 10,000 square miles have been consolidated into the South Georgia Power Company and these communities are now receiving uniform power service.

This territory is hooked up with the great Chattahoochee river power developments of the Columbus Electric & Power Company, of which the South Georgia Power Company is a subsidiary.

The Columbus Electric & Power Company and the South Georgia Power Company are under the executive management of Stone & Webster, Inc. The Columbus company is noted for the dependability of its service, so important to industrial operations.

Background

ONE of the several fundamentals contributing to the industrial supremacy of Southwest Georgia is its background of agriculture—the production of food stuffs every day in the year. This reduces living costs. Low land prices make it easy for workers to own homes and gardens and to live a normal life of contentment.

It was in Turner County, Georgia, that the COW-HOG-HEN program of diversification originated, and from there it is radiating and revolutionizing agriculture in the South. Farmers in this county are producing wealth and acquiring vision, understanding and sympathy with development. Outside capital entrusted to this community is fully appreciated.

Ashburn, the county seat of Turner, is an ideal setting for industry, offering all those advantages common to Southwest Georgia and the adequate hydro-electric power service of the South Georgia Power Company, a Stone & Webster managed enterprise. Citizens of Ashburn are interested in securing sound industries suited to this locality.

Confidential information may be had by addressing the Columbus Electric & Power Company, Columbus, Ga., the South Georgia Power Company, Albany, Ga., or write direct to the

Turner County Board of Trade

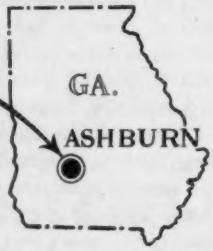
ASHBURN
GEORGIA

Guernsey Herd

Spotted Poland Chinas

Unloading Cream at Ashburn Creamery

White Leghorn Chickens



and the class of help employed, as well as the make of loom. In my opinion, the best osnaburgs made today are made from a mixture of 50 to 60 per cent of bollie cotton and 40 to 50 per cent of No. 2 strips free from thread.

As a matter of fact, "osnaburg" is the name primarily given to cloth for cement bags which cloth need only be rugged in strength and appearance for the purpose for which it is used, but cannot be said to be anything else than inferior cloth unless in the quality demanded, namely, strength.

CONTRIBUTOR No. 918.

EDITOR COTTON:

Replying to "Contributor No. 603" who desired percentages on seconds and shorts on osnaburgs, will say that on an osnaburg 30-inches wide, 40 x 30, and weighing 2.28 to the pound, my experience has been that we do not have seconds that we class as seconds on this kind of goods. These goods are made from low grade cotton, about 25 per cent card strips and picker motes and some sweeps. However, whenever a rent appears in the goods or any bad weaves pass the inspector he simply cuts out these pieces. Thus the remnants and shorts on this particular style have averaged about 1.31 per cent. I believe this will answer your contributor satisfactorily.

CONTRIBUTOR No. 919.

Humidification in the Picker Room.

EDITOR COTTON:

I would appreciate seeing in COTTON some information from men who have made actual operating tests, as to the effect of humidification in the picker room—its effect as to the cleaning of the stock, and the final breaking strength of the yarn.

CONTRIBUTOR No. 662.

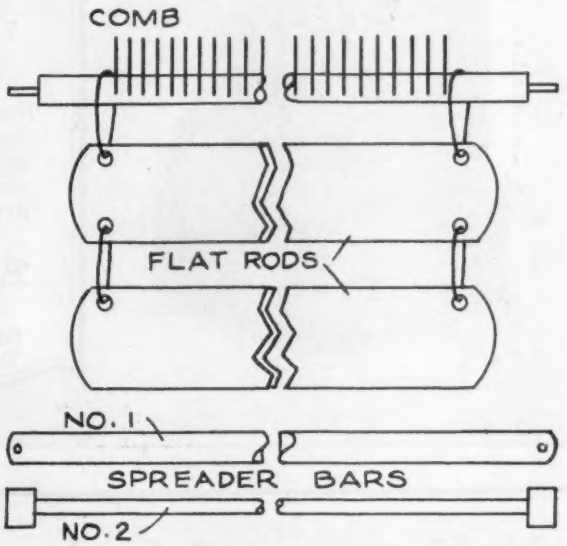
Selecting Combs for the Slasher.

EDITOR COTTON:

I have your question on slashing submitted by "Contributor No. 2327", and will say that regardless of all my years of warp preparation, I am at a loss to understand this matter of 10,000 ends being put on a loom beam. I have hand drassed up to 7,000 ends, 40s yarn, five colors on a 72-inch loom beam.

Sets as high as from 6,000 to 10,000 ends ought to at least be put on two beams in the loom. There will then be twice the number of yards on the beams. Also, if slashed properly, there should be no trouble as to crossed threads. Of course your contributor does not state anything about the goods these heavy ends go into. He has more courage than I could ever muster, to attempt to slash 185 ends per inch. It can't be done in the ordinary slashing way. If he must have 10,000 ends on one 54-inch beam, I would suggest that he place the section beams in the creel as two separate sets. That is if there are 20 beams in a set, place 10 beams over and under in the regular fashion. Then place the other 10 in behind, running these over the top of the set nearest to the size box, putting a string between the two sets of 5,000 ends and proceed as usual, putting strings in both sets. When the string which divides the sets comes to the front put the big rod in. Have a front comb regular old strony style, with 625 dents and a few extra. Commence and count eight threads from each set—16 ends to the dent all across. When laid in, put a rod between the sets and pick up all 8's of the bottom set on a flat, beveled edge steel rod. Have two flat steel rods made a few inches longer than the width of the loom beam out of 1/4-inch stock and about 1¼-inches wide. Bevel edges. After picking up the bottom 8s, insert the flat rod, then put the other flat rod in between the sets. You then have a set just as you would with a comb twice as fine, or 8 ends in the lease. These rods act just as spreaders. Have a hole drilled in each end of the flat rod and fasten to the comb.

As to what combs to use, there is no set rule. Sometimes that depends upon how many ends one puts on the



The top face of No. 1 bar is rounded. The bottom face of No. 2 bar is rounded and sets just a little under the level of No. 1 bar, which causes a small depression in the yarn. This tends to keep the ends from rolling or changing position.

warper beams—2,000 ends = 5 beams of 400 ends, which would run nicely through a 400 raddle. So in this case the striking comb would have 400 dents on 54¼-inches. Always have a couple of inches over as extensions to handle with. The striking comb in any case must have as many dents on 54¼ inches as one desires to use on the front comb, but for heavy sets, and using lease rods, counting in at the front of the slasher gives the best results. After a set has been laid in properly keep the fingers away from the sheets of yarn. I've seen many slasher tenders put in sets from striking combs, lay in in a hurry, then while the machine was running keep changing the threads from one dent to another to make the sheet look even. The proper way to do is to take plenty of time to start the sets as near perfection as possible. Go slowly, and the weaving and production derived by this advice will compensate for any time supposedly lost at the slasher.

MACK (GA.)

EDITOR COTTON:

What is the proper comb to use in slashing—both in front of the slasher and to strike a tape in the back? This question was asked in the May issue of COTTON by "Con-

Good Concrete? Why, Slag and Cement are first cousins

NO wonder the modern contractor is consistently getting concrete of *maximum* tensile and compressive strength with

ENSLEY & ALA CITY
BASIC SLAG
CRUSHED & SCREENED

For, chemically, pure Blast Furnace Basic Slag and Portland Cement are almost identical. This close kinship produces a permanent bond. A new standard of strength for concrete structures!

BIRMINGHAM SLAG CO.
Slag Headquarters for the South
Atlanta BIRMINGHAM Jacksonville
Thomasville Montgomery Ocala Fla.

All Frames Made to Order

There is only one best frame for any weaving job.

We endeavor to supply that *one best frame.* We can do it every time if we know the kind of fabric being woven, the size and type of loom, etc.

When an organization produces thousands of frames for every conceivable type of fabric it is only natural that they should become expert.

Are your looms equipped with custom-made Frames?

Detailed information gladly furnished on request.

STEEL HEDDLE MFG. CO., 21st and Allegheny Ave., Phila., Pa.

NEW ENGLAND OFFICE: 44 Franklin St., Providence, R. I.
SOUTHERN OFFICE: Steel Heddle Bldg., 621-635 E. McBee Ave., Greenville, S. C.
FOREIGN OFFICE: Hudders Field, Eng. Shanghai, China

FLAT STEEL HEDDLES

AND UNIVERSAL FRAMES

The Steel Heddle Line

"DUPLEX" LOOM HARNESS (Complete with Frames and Heddles fully assembled).
DROP WIRES (Nickel Plated, Copper Plated or Plain Finished.)
HEDDLES
HARNESS FRAMES
SELVAGE HARNESS
LENO DOUPS
JACQUARD HEDDLES
LINGOES
IMPROVED LOOM REEDS
LENO REEDS
LEASE REEDS
BEAMER HECKS
COMBS

Worth.

When you think of a man you seldom think
Of the knowledge he has of books;
You seldom think of the clothes he wears,
His habits, or ways, or looks.
You seldom think of the car he drives,
Nor the bonds his gold has bought;
When you think of a man you mostly think
Of some kindness he has wrought.
You judge him not by his blocks of stocks,
Nor his power of name or pen;
You judge a man by the place he's made
In the hearts of his fellowmen.
You judge him more by the fight he's made,
By the way he has faced the strife,
And not the amount of the bank account
He's managed to get in life.
You think of the friend he's been to man,
And the good that he has done,
And you judge the sort of a man he is
By the friends that he has won.

tributor No. 2327", who said he makes a wide range of sley from 2,000 to 10,000 ends on the loom beam, and he wanted to know the proper comb to use for these two counts. He added that the 2,000 ends are on a 38-inch beam and the 10,000 ends on a 54-inch beam. Recently, he said, he had trouble with crossed yarn, dressing a set of 9,712 ends 30/1 comb on a 54-inch loom beam, using a 500 comb in front and counting the ends in, making about 20 ends per dent in the front comb. He said he was careful about having it drawn in.

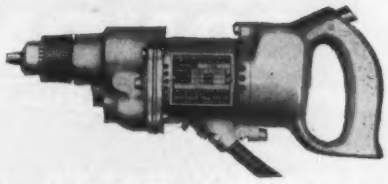
This man did not state what style of comb he uses in front of his slasher, but in any case it isn't really necessary for him to strike tapes on the back of the machine. In many cases, where the zig-zag or positive style of comb is used, the tape comb is struck just in front of the measuring roll in front, and the tapes are picked from there. When the straight-toothed comb is used, a web-drawer's comb (the fine-toothed comb used by web-drawers) is inserted at this same point (in front of the measuring roll) and brought down to the slasher comb and then the slasher comb is turned up into *that sheet*. This saves much time and a better sheet is produced.

This was the method I adopted some years ago at a mill where we had very straight warps. We had the Rhoades double comb and the Morrill slant tooth comb to work with. "Contributor No. 2327" should discard the striking comb at the back entirely, and order a Rhodes double comb with at least 1,080 dents, possibly 1,200, and run his yarn through the size rolls without size until perfectly straight; then draw the size if he wishes. Coming to the front of the machine, let the new set of yarn run up through full width and when perfectly straight, this is usually just before the strings come up, insert the web-drawer's comb and when it gets to the slasher comb, simply turn up the slasher comb.

If he uses the Morrill slant tooth comb, he will want at least 750 to 850 dents but there is absolutely no need to strike tapes in the back of the machine.

There are standard formulas to draw from in ordering reeds, but my experience with 22s and 30s yarn has proved this the best: Have the combs with any number of dents, not greater than 10 to the inch, to be spaced in the distance equal to the largest spread of the beam in front of the slasher. This has seemed to fill our requirements and give us straight warps from start to finish.

Thor ELECTRIC DRILLS



Here's the Drill With The Trouble-Free Motor

When you buy a Thor you know that you have a drill that is made for a lifetime—and one that needs the minimum of attention and repairs. The trouble-free motor, the careful workmanship along tested methods plus rigid inspections, insure a drill that can be depended upon at all times.

Here is a drill that is built the way you have always hoped an electric drill would be built. Speedy and dependable, it can be used day in day out for years.

And it's safe—shocks are impossible, because a three safety cable is standard equipment.

Have you a copy of our catalog in your files?

Try a Thor for 30 days at our expense. If you are not satisfied with its performance—return it. No obligation to you—no red tape. Take advantage of this liberal offer.

TOOL MAKERS SINCE 1893

INDEPENDENT PNEUMATIC TOOL CO.

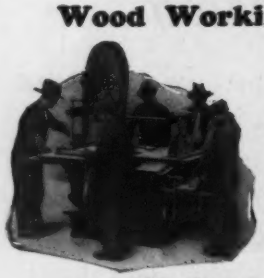
PNEUMATIC TOOLS — GENERAL OFFICES 600 W. Jackson Blvd. CHICAGO — ELECTRIC TOOLS

FACTORY AURORA, ILL. — BRANCHES THE WORLD OVER

Eastern Office 1463 Broadway, New York. — London Office 40 Broadway, Westminster, London.

ALL STEEL
ECONOMY
FIRE PROOF
BALING PRESSES
ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.
ECONOMY BALER CO., DEPT. C, ANN ARBOR, MICH., U.S.A.

CRESCENT
Wood Working Machinery



You have to depend so much on the wood working machinery in your maintenance department in cases of emergency that you must have machines that are substantial, efficient and always ready to run when you need them.

The Crescent line consists of band saws, saw tables, shapers, jointers, variety wood worker, planers, planer and matcher, disk grinders, cut off table, swing saws, borers, hollow chisel mortiser, tenoners, self feed rip saw, universal wood workers.

Ask for circulars of machines in which you may be interested.

The Crescent Machine Co.
609 Cherry Fork Ave., Leetonia, Ohio. U. S. A.

14 Years Experience
In Textile Cost Service

More Than 20% of All Cotton Textile Spindles in the United States are Operated by clients using our Cost Methods!

Let us come and demonstrate to you the accuracy and simplicity of our Textile Cost Method.

Write for our booklet, "Losses in Textile Plants"

RALPH E. LOPER & CO.
Specialists in Textile Cost Service
Industrial Engineers
FALL RIVER, MASS. GREENVILLE, S. C.

MICHAEL & BIVENS, INC.
Electrical Engineers and Contractors
Textile and Municipal Plants
Expert Motor and Transformer Rewinding
GASTONIA, N. C.

BARBER-COLMAN COMPANY
General Offices and Plant
Rockford, Ill., U.S.A.
Framingham, Mass.
Greenville, S.C.
-Knotters-
Warp Tying Machines
Warp Drawing Machines
Automatic Spoolers
High Speed Warpers

RAYON
The Most Popular Product in the World Today

Yet there is a great deal to be learned about the Winding, Knitting, Dyeing and Finishing. Years of experience in all branches have enabled me to invent

SPECIAL DEVICES for Knitting Machines.
CONDITIONERS for the yarn which eliminate the use of oil entirely and give a better fabric.
DYEING AND FINISHING MACHINES.
WINDING MACHINES equipped with an Automatic Builder mechanically thrown in and out of action which gives perfect winding.

I know you are anxious to improve your product and decrease the cost. Why not write and give me an opportunity to explain my equipment?

OTHER PRODUCTS—Cloth Cutting, Folding and Winding Machines; Pipe Loading and Turning Machine; Cloth Turning Machine; Paraffine Device; Button and Button Hole Spacers; Band Cutting and Folding Machine; Neck Marking Machine; Vertical Drying Machine; Oiling Device for Spring Needles; Shrinking, Steaming and Pressing Machine. Also design special machines on request.

J. A. FIRSCHING
614 Broad Street Utica, N. Y.

Bradley
Stencil
Machine

The Bradley Stencil Machine makes Stencils in half a minute at reduced cost of 1-10c each. Write for catalogue and price list.

In universal use by thousands of manufacturers and shippers.

Oil Paper, Stencil Paper and Inks. Bradley Ball Stencil Pot uses Liquid Ink for marking and stenciling. Price 60c or $6.00 per doz. Manufacturers of Oil Stencil Papers.

Write for Prices and Samples

A. J. BRADLEY MFG. CO.
99 Beekman Street NEW YORK

In the New Bedford mills where anything and everything in the line of fancies is handled, everything is usually *counted in*, especially work of 2,000 ends, and there is mostly between 500 and 600 dents zig-zag combs used, while this gives a nice-looking warp a Rhoades double comb would be a big improvement, but on 2,000 ends we would not think of striking tapes.

If this man will let me know how many harnesses he is using, I may be able to give him an idea how to draw these heavy-ended warps without a hitch of any kind in them. This would mean a little more work but it's worth it. There is another suggestion that may be helpful. In running so many ends, if only one size box is used, it's a tough job sizing it. By using two boxes half the set can be run through one box and the other half through the other box.

S. T. H. (MASS.)

EDITOR COTTON:

In reply to "Contributor No. 2327", speaking of the slasher comb in front of the slasher, I use a fence worm round tooth slasher comb, which is satisfactory and gives the best results. From the information given in this man's question, which you published in the May issue of COTTON, it seems that his threads stack up in the comb dents and roll about at different times, causing the work sometimes to be drawn in and then come up with rolled or crossed ends. It is not advisable to have too many ends in a dent as it stacks them and presses them too hard and doesn't give the desired evenness. On the fence worm comb we can get any amount of ends desired, almost, regardless of the width the dents remain the same distance apart.

Sometimes you might run across a mill where they tell you to do with what they have, and as a round tooth fence comb is very expensive, this man might use a home-made system, which works fine. In case the comb cannot be secured, he can make a stand for each side of the slasher between the first and second cradle bars and draw a large wire across over the warp just as it starts under the cradle bar, and fill it with drop wires, as many as needed, and then as he picks the warp use a drop wire between as many threads as he desires. If there are 20 ends per dent, as he says, use a drop wire between every 10 ends or every 5 ends if necessary. I always like to have the ends make the same count as the section beams, but that is not always practical. The drop wires, as stated, will guide the warp under the cradle roll straight and give good service.

As to the striking comb, I never use one. He can use a strip of gummed paper on each section beam and then as the last strip of paper runs over, put two strips of paper under the warp and two on top. This will carry the ends over very successfully and satisfactorily.

If the foregoing suggestions do not help, and he is going to use a striking comb on the back, I would suggest a 60/1 comb as the ends would be less in the dent than a 30/1 comb would give. I hope some of these suggestions will be of some help; at least enough for a trial.

M. C. (N. C.)

A booklet describing the Whitin line of improved pickers or lappers, embodying the company's latest developments in this process, has been issued by the Whitin Machine Works, Whitinsville, Mass.

Textile mills considering direct sales of their production in the finished state to the wholesale, the retail, or the cutting up trades, can eliminate credit risks and keep distributing costs at a minimum through using the services of the Textile Banking Company.

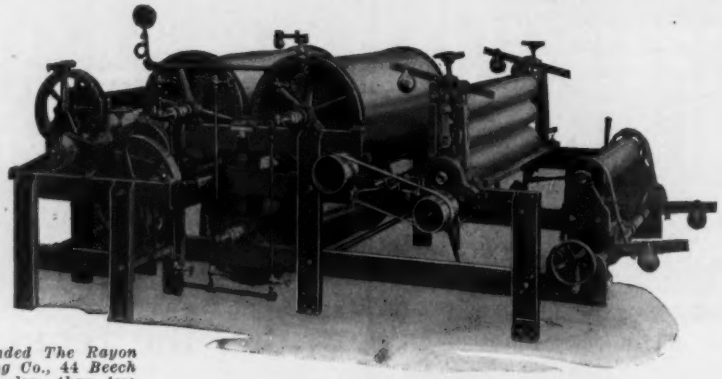
Sales are converted into cash immediately upon shipment of goods.

Correspondence or interviews with reference to selling and factoring textile mill production invited

TEXTILE BANKING COMPANY
50 Union Square
New York

FACTORS

THE JOHNSON WARP-SIZING MACHINE



Mr. C. W. Yenny, founded The Rayon Processing & Warp-sizing Co., 44 Beech Street, Paterson, N. J., less than two years ago and now runs four of our sizing machines,— and has this to say:

PATENTED WARP-SIZING MACHINE 81

"I ATTRIBUTE THE RAPID DEVELOPMENT OF MY BUSINESS TO THE EXCLUSIVE USE OF THE JOHNSON WARP-SIZING MACHINES—VISCOSE, CELANESE, BEMBERG, TUBIZE, SNIA,—ANY BRAND OR GRADE SIZED WITH EQUALLY FAULTLESS RESULTS."

CHARLES B. JOHNSON ∴ 10 Ramapo Ave. ∴ Paterson, N. J.

British Representative
-TEXTILE ACCESSORIES, LIMITED-
Manchester, England

ASK FOR *CIRCULAR, DEMONSTRATION*

Southern Representative
G. G. SLAUGHTER
Charlotte, North Carolina, U. S. A.

It Reduces the Time Clock's Usefulness to Mere Form—

The Time Clock may register the time your weavers put in, but not necessarily the time put into profitable production.

Keeping tab on your employes is highly necessary, but keeping accurate account of their output is the thing that determines your profits.

The time clock keeps record of your weavers' whereabouts, but not on their efforts; they can pad their piece work reports, and the time clock doesn't know a thing about it, but the Root clock does! One of these infallible record keepers on each loom takes note of all spurts or lagging in production; padded reports are impossible; in other words, just picks actually woven can be recorded.

What greater accuracy could be had for receiving pick for pick value for every cent paid via the pay envelope? Let us send more facts.

Two Clocks

One Registers Time Put In—The Other Records the Time Put into Profitable Production. Which is the More Vital.

THE ROOT COMPANY

106 BECK ST., BRISTOL, CONN.

Offices and distributors in most of the principal cities.

ROOT COUNTERS

Cost of Roller Covering.

EDITOR COTTON:

My cost for covering 1,000 rolls—4-inch cot or double boss, 2-inch on each side—is $40.00. The cost of this in an outside shop is $86.00.

This is in answer to "H.C. (S.C.)" who asked for this information in a recent issue of COTTON. He also requested further details as to the time required for each operation. In answer to this I will say that it takes us one hour to clean and cement the cloth on 100 solid rolls; 55 minutes to draw on the cots and finish the ends in the lathe, 100 rolls; 60 minutes to cut the strips and block 1,000 cloths; 50 minutes to scarf and cement 100 4-inch cots. We get 12 4-inch cots to one square foot of skin; and 204 cloths to one yard of white cloth. We use the best skins, and all of the other materials are first-class.

CONTRIBUTOR NO. 655.

Using Steel Harness on Heavy Work.

EDITOR COTTON:

I notice that in the February issue of COTTON, on page 364, you published a question from a man who said he was having trouble with steel harness cutting the warp ends in weaving a 16-ounce duck, using 9.75s warp with a very heavy sley. He wanted to know whether this cutting of the warp ends by the heddle eyes was the result of the eyes not being polished up enough, or whether it was in the setting of the harness or the warp sizing.

Six men answered this question, in the April issue, beginning on page 580. I happened to have contributed one of these letters, and was very much interested to read all of the opinions expressed, which gives some different ideas as to the cause of this difficulty.

Since writing you my suggestions on the question, I have heard of another mill having trouble with some steel harness cutting their warps. It seems they only had a few sets that gave them trouble, and the way they overcame the difficulty was to put some grinding compound on the warp yarn and run the loom for a while with the warp stopped, so that the compound would polish the steel heddle. They claim that this cured their trouble.

I am passing this along in the thought that it might be of interest to the man who asked this question, as well as other gentlemen who replied to this query.

CONTRIBUTOR NO. 102.

A Picture Book of Ideas.

"Handling Things from Where They Are to Where You ant Them" is the title of a new 96-page book being distributed by the Link Belt Company, 910 South Michigan Avenue, Chicago, Ill. It is, as indicated, a picture book of ideas on methods of handling material in all kinds of manufacturing plants. To the operating executive of the cotton mill it will prove an interesting study in presenting what may be a more economical method, or perhaps a more orderly method, of handling some of his stock in process from one part of the plant to another or from one department or machine to another. Many times the pictorial suggestion might be applied to something entirely different but it gives an idea which the executive, with an eye to improvement, can easily adapt to his own manufacturing conditions. This book is known as No. 575.

Better Lubrication at *Less Cost* per month

For scientific Lubrication of Textile Machinery—use

TRADE MARK REGISTERED IN UNITED STATES PATENT OFFICE
NON-FLUID OIL

Modern Textile Lubricant

because it stays in bearings and won't leak or drip out like liquid oil—and so gives positive and continuous lubrication—

because it stays in bearings and keeps off the product—greatly reducing profit discounts caused by oil spots—

because it lasts so much longer per application that it costs less per month for better lubrication.

Write today for testing sample and bulletin, "Lubrication of Textile Machinery."

Lewis W. Thompson, Charlotte, N. C.
Southern Agent

NEW YORK & NEW JERSEY LUBRICANT CO.
MAIN OFFICE: *292 MADISON AVENUE, NEW YORK, N.Y.*
Warehouses:
CHICAGO, ILL. PROVIDENCE, R.I. ATLANTA, GA.
ST. LOUIS, MO. PHILADELPHIA, PA. CHARLOTTE, N.C.
NEW ORLEANS, LA. PITTSBURGH, PA. GREENVILLE, S.C.

An Ideal Winder
for Rayon
also Silk and Fine Mercerized Yarns

Also warpers and other special textile machines.

THE SIPP MACHINE COMPANY
PATERSON, N. J.

Southern Representative:
GIBBONS G. SLAUGHTER, Johnston Bldg., Charlotte, N. C.

Cockled Yarn.

EDITOR COTTON:

I have just been reading in the May issue of COTTON the report of the Spinning Division meeting of the Southern Textile Association, held at Union, S. C., and note the discussion there with reference to how cockled yarn is made. One man said he believed it was made between the front and middle rolls. This is impossible, as no twisting or winding is done between the rolls. Another said "Pull the cockles out and you have perfect yarn." This is impossible, as the twist at the cockle is not the standard, and when pulled out it is about half the size of the standard yarn, and under ordinary working strain will break down.

For the past thirty days I have been having the pleasure —or whatever other name you can call it—of fighting cockled yarn, due to mixed staple in our mixing. We test every bale before opening it, but this trouble comes from the planter in mixing the seed cotton. They experiment with the regular run of cotton seed and probably plant a small amount of improved seed. At gathering time they bring all their cotton in to the gin, the ginner doesn't care if it is long and short mixed. He gets his price. The farmer gets out a nice sample, sells it for Strict Middling 15/16-inch. The mill man buys it and then the fire works start about the time that cotton hits the spinning room—sometimes before. He has cotton from 7/8 -inch to 1 1/16-inch. His rolls are set for 15/16-inch cotton or about 1-inch. When the longer staple comes the front roll is stopped for a fractional part of a second, with the end of the long staple sticking out in front; the cockle starts forming and continues until the other end is released by the middle roll. The long staple is wound up in the same manner as it is when making ratine filling on spinning.

After watching this performance for the last thirty days I have come to the conclusion that cockled yarn is made in front of the roll. Mr. John S. Lockman is right when he said, as reported on page 633 of the May issue, that "The longer the fibers are the bigger the cockle will be."

O. T. (N. C.)

EDITOR COTTON:

One of the members at the Sectional Meeting at Union, S. C., in the discussion of cockled yarn, said that his regular twist yarn cockled if he closed his rolls, but on the same hank roving his crepe yarns did not cockle with the rolls closed and he used a lighter traveler than on his regular twist yarns. Crepe yarns being run with a very high twist, it becomes necessary to use a lighter traveler to prevent the threads being cut down at the traveler.

Well said! We spinners all know that if cockled yarn shows up on our spinning, it first appears on the soft twist or filling yarns. This has generally been considered to be on account of a lighter traveler being used on the soft twist yarns. The hard twist yarns usaully being run with a heavier traveler have a tendency to pull the cockle out, and a mill on 30s warp and 40s filling may be bothered with cockled yarn on the filling and seldom see a bobbin on the warp frames unless it be when the frame is stopped. Then it can be detected at the bite of the roll; once the frame is going again it disappears.

Now Mr. Editor, it becomes necessary for a further discussion on the subject, and let's have it through COTTON'S columns.

First. If the cockle takes place at the bite of the roll in front, what makes soft twist yarns cockle worse than hard twist yarns? It appears that this being true, the more the twist, the greater the cockle.

Second. We assume that the traveler has nothing to do with it, as the member stated that his lightest traveler was on the hard twisted yarns.

Third. If the heavier traveler has nothing to do with the cause of hard twisted yarns not cockling the same as soft twisted yarns, then the greater the twist, the greater the cockle if it takes place at the bite of the front roll. Why doesn't the discussion clear this member's question?

Pardon me, Mr. Editor, for taking so much space. Lay it to the member who shot my pet idea to pieces, and let the boys straighten this question out.

M. V. J. (N. C.)

Southern Textile Association Program for Asheville Meeting.

An interesting program has been arranged for the annual meeting which will be held at the Kenilworth Inn, Asheville, N. C., on Friday and Saturday, June 17th and 18th.

W. H. Gibson, Jr., manager and superintendent, Aileen Mills, Biscoe, N. C., is president, and will make the president's address at the opening session on Friday morning at 10:00 o'clock. This will be followed by the reports of the various sectional discussion division chairmen. One of the chief speakers at this session will be a representative of Wellington, Sears & Company, Boston. The concluding address of the session will be made by H. G. Winget, superintendent, Victory Yarn Mills Co., Gastonia, N. C., who will discuss "Human Relationships in Industry."

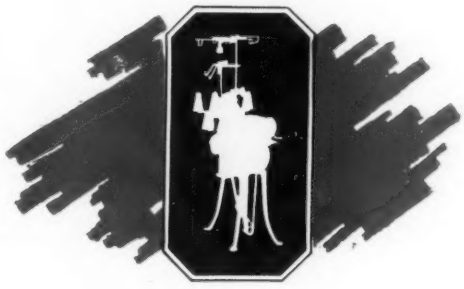
The afternoon will be given over to a golf tournament at the Asheville Country Club, in charge of W. W. Moore, Allis-Chalmers Mfg. Co., Charlotte, N. C.; Fred B. Crowell, E. H. Best Co., Greenville; and Sam P. Rakestraw, National Gum & Mica Co., Athens, Ga. The usual banquet will be held on Friday evening in the main dining room of the Kenilworth Inn.

The final session on Saturday morning, at 10:00 o'clock, will be featured by the appearance of George S. Harris, president of the American Cotton Manufacturers' Association, and the presidents of the three state associations of financial executives. Also, George A Sloan, secretary of the Cotton-Textile Institute, Inc., will outline to the operating executives the work of that organization. Rev. J. W. Speake, of Spartanburg, S. C., will discuss the relation of church to industry.

A business session will conclude the convention, following the addresses just mentioned. Election of officers will be held, and the next meeting place selected. Another feature will be the presentation of Arkwright charms to those whose Arkwright tests have been approved and who have been elected to membership in The Arkwrights, the research organization of the association. The S. B. Alexander medal will be presented to the man selected by the board of governors as having contributed most to the industry during the past year. At the Tybee meeting last summer this medal was awarded to F. Gordon Cobb.

M. W. Higgins has become overseer of weaving at Roanoke Mill No. 2, Roanoke Rapids, N. C.

Knitting Section



WE like to feel that the success of the knitting industry is ours, too.

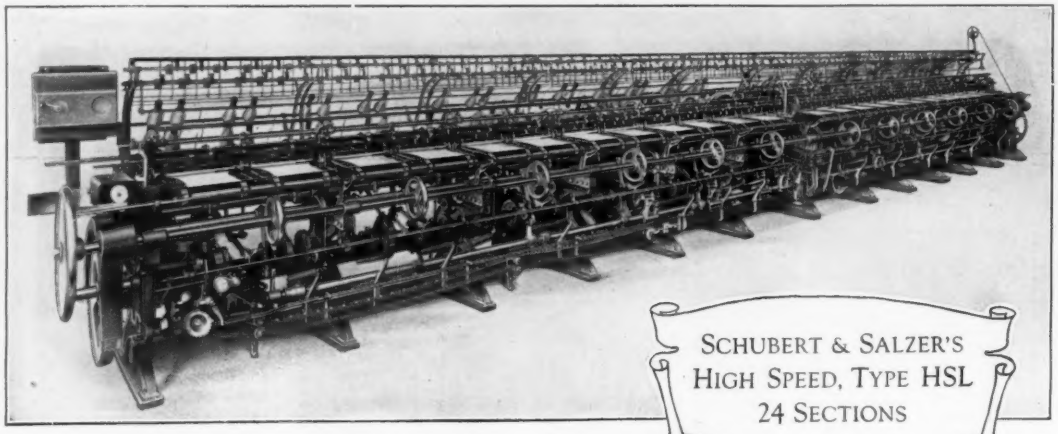
This sympathetic alliance with the industry we serve has inspired the most careful attention to knitting requirements. It is the motive power behind the excellence of Scott & Williams machines, and our ability to incorporate improvements when conditions indicate the need for them.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 Broadway, New York



SCHUBERT & SALZER'S
HIGH SPEED, TYPE HSL
24 SECTIONS

After Sale — Service!

A Matter of Vital Importance

IN ORDER that purchasers of Schubert & Salzer's Full-Fashioned Hosiery Machines may be free from delays and inconveniences, we carry at *West New York, New Jersey* a complete line of parts.

We also operate a modern and well equipped machine plant for emergency repairs.

The superior construction of Schubert & Salzer's Full-Fashioned Hosiery Machines, backed by such service as this, assures you, not only of the absolute maximum in production, but also a fabric of the highest quality.

"Ask the man who operates one"

ALFRED HOFMANN, Inc., West New York, N.J.

Full-Fashioned Hosiery Machines

INTERIOR OF FACTORY OF ALFRED HOFMANN, INC., AT WEST NEW YORK, NEW JERSEY

The A B C of Dyeing

By NOEL D. WHITE.

Much has been written in books, pamphlets, essays, etc., on the dyeing and finishing of textiles, but all of it, or nearly all, has been written by technical men, or by manufacturers as a means to sell their wares. From the standpoint of the man in the dyehouse those writings, while they are valuable for giving general knowledge on the subject, practically they do not fill a much needed want.

What I have in mind is that given a special subject; for instance, "Dyeing Full-Fashioned Hosiery", the dyer reads up on the subject thoroughly and then proceeds to put to practice what he has learned. He has learned to boil off the hosiery, wash it, dye it, finish it, and send it to the boarding room after whizzing it in the extractor; or he may have learned to boil it off and dye it in the same soap bath.

This article is not advocating the advisability of either method; I will treat that at another time. In either case the operations after dyeing are the same. After he dyes his lot he finds sometimes that results are not as expected. Of course, if he is an experienced dyer he knows what is wrong and proceeds to correct it. But an experienced dyer need not read this except to offer criticism, which will be very welcome. I can absorb a lot of knowledge yet.

The majority of dyers, especially in the South, are not experienced in dyeing full-fashioned hosiery. I have mentioned this fabric to illustrate what I have in mind, this is the point I want to bring out:

As on the finer goods there is less cotton than on the circular knit hosiery, therefore the old formula must be modified or the results on a given shade will not be the same. If he has not taken that point into consideration the heels and toes will be much darker than desired.

How is he going to reduce the color on the heels and toes, and make a more uniform job? He can look up a whole library and will not find a way to do it. He is in for a whole day's struggle. There was a time when he could turn the lot into black, and start on a new lot. Everybody knows that is out of the question now. Maybe he can strip it with some stripping agent, but the goods will not look as fresh afterward as new goods should be. Also, some colors will not strip to a good white again.

Now this is only an instance, and there are many, many more cases where a dyer is confronted with a situation where he can hardly extricate himself with credit, and a book on the subject of correcting faulty dyeing would surely fill the bill. I have a suspicion, though, that such a book should be the work of a dyehouse worker familiar with most of the problems coming up in the day's work.

A situation like the one described would be welcome in our plant, paradoxical as it seems, and that goes to prove that no two dyers work exactly alike.

We dye with acetic acid in the bath. When the cotton happens to be darker than the silk, the addition of a little more acetic acid and an extra boil will reduce the color on the cotton and make the silk absorb it.

I am aware, however, that no hosiery dyer has learned to use acetic acid in their dyeing. I have received much criticism, but nobody yet ever convinced me of the advisability of changing my system of dyeing .

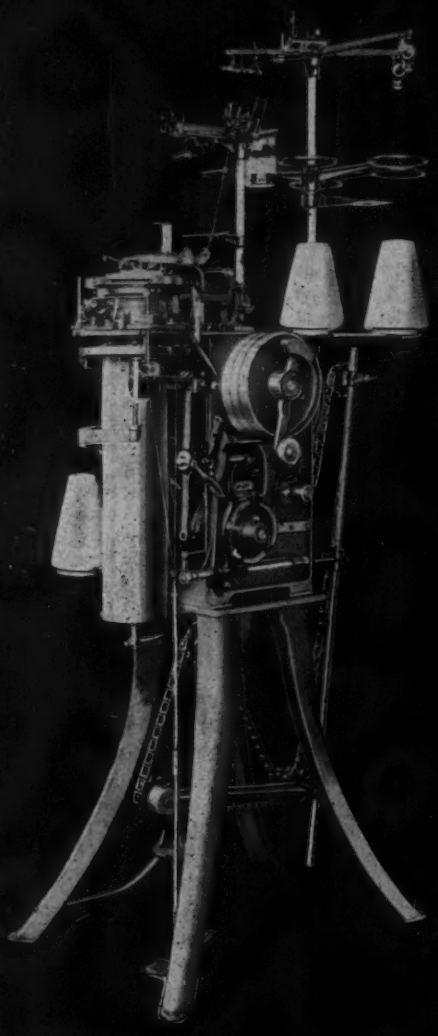
On the other hand, if the hosiery has a cotton top, every dyer who has handled full-fashioned work with cotton tops knows how tightly knit they seem to be, and how hard it is for the dye to penetrate them.

When I first started dyeing them, two or three pairs at a time as samples, I used to put them in with some other lots of our regular work, the circular knit hosiery. While our regular work came out even, the samples were always cloudy and streaky, and gave us some real worry. Then it would be argued that my way of dyeing, with acetic acid, was the cause of it. I talked it over with a dyer friend of mine, who was always opposed to my method, and was advised to dye in the boil-off bath. Also I looked over many valuable text books on the application of dye stuffs. While I had time I wanted to learn and be prepared against the day when I would be called upon to dye these goods for the market. But I did not learn a single thing that would be useful in my predicament.

When we started in the full-fashioned business, I was given some stockings of this kind. The knitters had started the new machines with them, but I was assured that the kind we were going to have were to be chiffon weight and not to worry about what I had on hand as they had come out uneven and the mill was not going to sell that kind anyway. So I had not given the matter much thought, and the new work never gave us any trouble. However, when it was decided to add the heavier grade, I was up against it. A little thinking and recollection of past experiences, many years of practical work, the experiences of others which I called to my mind, and a careful analysis of the situation solved the problem.

On several occasions I had trouble with ribbed top hosiery, which in spite of all my care, persisted in coming out uneven at times. I used to start the dyeing at 120 degrees to 130 degrees F., entered the dissolved dye stuff at that temperature, raised the heat to a boil, and boiled for twenty minutes; then added the necessary amount of Glauber's salt (from 5 to 30 per cent, according to the amount of dye stuff) and closed off the steam to let the bath cool down for twenty minutes. At this time was entered the necessary acid, (from 2 to 4 per cent, according to the nature of the dye stuffs) and after ten minutes the bath raised to the boil. Twenty minutes later we took a sample, and if everything had been done according to Hoyle the shade had to be correct, and usually it was except for the streaky tops that appeared at times. We finally succeeded in eliminating them by boiling thirty minutes instead of twenty minutes before entering the salt, and then entering the salt in two portions; one-third at first, and two-thirds the second time, with a ten minutes interval. Simple enough when you think about it, but it was a long time before we thought of it, and tried it. After that we had no trouble with cloudy and streaky tops.

Now, if that was a good way to dye ribbed top hosiery and get it even, maybe it would be a good way to dye this new and troublesome full-fashioned heavy work. I must also mention that at this time I had found an aid to even up the dyeing. By adding four ounces of Tetracarnit to one hundred pounds of goods, the last vestige of unevenness disappeared. We had learned to make our dye penetrate evenly to every stitch of the hosiery.



Years of
research
back of every
Wildman
Machine

WILDMAN
THE WORLD'S STANDARD

WILDMAN MANUFACTURING CO.
Norristown, Pa.

We have issued a new edition of the complete and informative book, "The Science of Knitting." Price, $2.00.

WILDMAN
SPRING NEEDLE KNITTER

We awaited with some trepidation the arrival of the first lot of the new work. When it came we were prepared, at least I thought we were, and I personally watched every phase of the operations, followed the lot every step of the way until it got to the inspectors table, and I was surely gratified to find that we had a perfect job. This shows what can be done with care and study.

In the next article I will take up the boil-off and dyeing in one and two baths, also the use of acetic acid in dyeing and finishing hosiery.

Multi-Colored Effects on Multi-Fibered Hosiery*

By H. GRADY MILLER.†

In my talk I do not propose to give you any new or scientific information as to the production of fancy multi-colored effects on multi-fibered hosiery, but I am going to talk to you in dyer's terms and I propose to tell you here, just how we are producing multi-colored effects at the Elliott Knitting Mills.

There are many ways of producing multi-colored multi-fibered effects on fancy hosiery by combining dyed yarns and the many different textile yarns, namely the different rayons, each made by a special chemical process and having different affinities for dyestuffs, celanese, wool, silk and cotton. There is practically no limit to the fancy colored effects that can be produced by using these many different yarns dyed or undyed, although each shade and pattern is a problem in itself with which the dyer has to become familiar.

In dyeing our fancy hose number, each batch is given special attention in every operation that it is to go through while in the dyehouse. We make sure that each dozen lot is thoroughly "opened up" and loosened up so that none will be compact or crowded in the dye bath, as this will tend to cause uneven dyeing by our method. Our next operation is to put the goods in the dye tub for coloring. In dyeing the fancy number we use as long a bath as is possible. Before the goods are entered into the liquor in the tub, we add about 3 per cent Orthocen G and bring the temperature up to about 100 degrees F. revolving the dye cylinder for a few times so as to thoroughly mix the Orthocen G with the water. At this temperature we loosen up the goods again as they are entered into the dye tub.

The hose are worked in this wetting out liquor for about five minutes, then, without further heat or a raise in temperature in the tub, the dyestuff is added, which has been previously boiled up in a three-gallon Monel metal bucket. Three gallons of the dye liquor are added to the tub in quart quantities on the downward, or forward, motion of the dye tub cylinder. After the dye has been added, we run the tub for five minutes without further steam, then we raise the temperature very slowly to 120 degrees F. At this temperature we stop the tub and see if the goods appear to be dyeing evenly, and if not, we loosen them again as sometimes the goods that are in the center tend to dye unevenly. After this operation we raise the temperature very slowly to 160 degrees F. in about 10 minutes and then cut off the steam.

For the remainder of the dyeing operation, we let the steam "coast downward" for there is no need of more steam for the colors that have been used. You will also note that we are dyeing in the wetting out bath and that we are using colors that exhaust without the addition of salts. We let the tub run for two minutes at 160 degrees F and then take a sample for comparison with the standard. We have found that this will allow about three minutes more time for the goods to be worked at this temperature, which, in all, gives them about five minutes at 160 degrees F. After many runs and tests we have found that this is the correct time to run our goods to get the desired shade and to have the batch dyed evenly. On no occasion up to the present time, have we found it necesary to run the tub longer or to make further additions to the dye bath to match our standard shade.

The remaining operations, for finishing this fancy number, are few and simple. After running off the dye liquor, the goods are given one good rinse in cold water, then they are extracted and sent to the boarding room.

We have managed to keep our shades on this fancy number down to three, namely, champagne, French tan and light gray, all light shades. You will notice that we have only a small part to do in the dyehouse to complete the multi-colored effect in this style of our fancy number, that is: to dye the top, heel and toe and to wet out the goods for the boarding room. In examining this fancy number, it can readily be seen that colors have to be selected that will exhaust evenly and at a low temperature. Next, care must be taken so as not to "bleed" any of the knitted pattern and the rayon effect must be kept clear in the finishing touches. We have found that higher temperatures will cause the knitted patterns to fade into the top, heel and toe, and also color the rayon, thereby throwing our shade considerably off from the standard; consequently, one can readily see that the temperature has to be controlled perfectly because the goods are wetted out and dyed at the same time. We have had our troubles in dyeing this fancy number, but we think that we have practically overcome most of them at this time.

If higher temperatures are to be resorted to where colored yarns are used in the knitted pattern, then it will be found advantageous to employ the use of vat dyed yarns or thoroughly soaped sulphur colors; and if the silk effect is to be kept white or cross dyed, then the use of celanese for the silk effect will be found very successful, as this yarn will stand a temperature of 180 degrees F., without very many of the direct colors having any affinity for it, especially in a soft bath. We have found that sulphur blues and browns bleed very much at high temperatures with our dyeing method for fancy hosiery, and another strong objection to their use when dyeing just under the boil, or at 180 degrees F., is this: the color that bleeds off tends to combine with the fatty acid of the wetting out assistant and any iron or magnesium that may be present in the water, and in turn this scum causes spots on the hose that are very difficult to remove.

I have a hose here, a French tan shade, dyed in a soft bath at 180 degree F. with Benzo Fast Brown RL. The

*An address before the Southern Section of the American Association of Textile Colorists and Chemists, at Greenville, S. C.
†Dyer at the Elliott Knitting Mills, Inc., Hickory, N. C.

Perfect Split-Foot Product with Pointed Heel Reinforcement

There is constant satisfaction in a knitting machine which produces perfect work. You can buy our Split-Foot Pointed Heel machine with the full confidence that it will knit automatically a perfectly tapered reinforced heel, without leaving any unsightly fringe, or trimmed, or ragged edges resulting from the usual floating yarns—a product of beauty and endurance exactly as shown in the above cut.

Users of the "Banner" Split-Foot Pointed Heel machines are absolutely free from any infringement.

HEMPHILL COMPANY

MAIN OFFICE AND FACTORY

PAWTUCKET RHODE ISLAND

Philadelphia Sales and Show Rooms
Colonial Trust Bldg., 13th and Market St.

New York Sales and Show Rooms
93 Worth Street, New York

Southern Office
James Bldg., Chattanooga, Tenn.

white silk effect in this pattern is celanese, which you will see is left practically clear. In this pattern, as in the other patterns which I have for your inspection, you will notice that the dyed yarns are all heavy shades. When heavy shades are used in the pattern, then it is not a hard job to dye a light mode shade on the top, heel and toe. Light shades can be used in the pattern, but such yarns have to be resisted or they will change considerably in the dye bath.

In producing the shade of champagne the following colors were used for 100 pounds of goods:

235 grains Erie Brown 3GN
141 grains Erie Orange Y
47 grains Erie Orange A
47 grains Direct Fast Yellow NN.

For the French tan per 100 pounds of goods:

840 grains Erie Brown 3GN
465 grains Erie Orange A
327 grains Diazine Black DR
12 grains Erie Orange Y
12 grains Erie Cardinal 7B.

For the light grey, per 100 pounds of goods:

1320 grains Trianol Direct Fast Grey G.

After many experiments we have chosen these colors, because they exhaust at a medium speed, not too slow nor too fast; and because these colors dye evenly at a low temperature without the addition of salt. These colors are used in our wetting out bath, which is to our advantage because it reduces handling the goods, and these colors, in a short bath at a low temperature, seem to leave the rayon silk effect unstained.

We have a few redyes on this fancy number, sometimes two or three dozen pairs out of a 180 dozen run that dyed a bit uneven. We have, in every instance, touched up these goods so that they would go as "firsts" in the following manner: We prepare a bath with about 2 per cent Orthocen G and raise the temperature to 160 degrees F. The goods are entered at this temperature and run for about 15 minutes with the steam cut off. We have found that this method levels our goods perfectly.

My subject is "Multi-colored Effects on Multi-fibered Hosiery," and I have, therefore, not included solid, or union shades on many fibered hose, such as mercerized cotton, rayon and silk. I might say, though, briefly, that the mode shades can be produced on these fibers in most instances by using union colors, with the exception of cordovan, rose taupe, gunmetal, navy blue, etc. Each of these last mentioned shades requires special dyes and special dyeing methods, under mill conditions, to produce a good union on all the fibers.

New Booklet on Fidelity Ribbers.

A well-prepared booklet describing the Fidelity Universal ribbers has been prepared by the Fidelity Machine Co., 3908 Frankford Ave., Philadelphia, and copies may be secured upon request to the company. The book describes and illustrates this line of ribbers, together with the attachments, stop motions and accessories.

Arthur T. Brainerd Now Mannager of Ciba Chicago Office.

Ciba Company, Inc., announce the appointment of Arthur T. Brainerd as Manager of the Chicago office of this company. Mr. Brainerd assumed his duties at 233 West Huron Street on May first.

A Valuable Book on Knitted Undergarments.

The problems of the finishing room, from the details and characteristics of fibers and yarns to the special requirements of buildings, approved methods of plant layout and the methods of establishing cost control, have been covered in an exhaustive 232 page "Manual for the Manufacture of Knitted Undergarments" just published by the Union Special Machine Company of Chicago.

The new book, which represents practically four years' work on the part of the finishing room engineers of the Chicago company and other authorities in the field, is profusely illustrated and has been prepared in loose leaf form so that it may be constantly kept up to date. An immense amount of practical data has been included, all of which has been carefully checked and selected from plants where the best practice obtains or has been developed from a large amount of special research which was carried out in compiling the information contained in the book.

The first chapters cover the production and fabrication of the threads, yarns and other materials used in knitted undergarments. This is followed by a section devoted to the details of plant layout, power requirements, illumination, etc. A number of abundantly illustrated pages are then devoted to stitches, seams and stitchings, the uses and methods of application of each one being described or illustrated.

Almost a hundred pages are devoted to the description and illustration of the many actual finishing operations and processes used in the modern knitted underwear plant. Numerous illustrations of complete garments, details of seams, methods of operations and machine arrangements for doing the work accompany the directions and data explaining the most approved methods of finishing. Some of the general classifications in this section of the book include: Assembling and Seaming, Facing, Edge Finishing, and Miscellaneous Finishing, etc.

Another section of more than sixty pages is filled with tables and data showing for practically any given operation on knitted underwear the proper thread and needle sizes, the number of stitches recommended per inch and a great deal of other valuable information including figures covering average hourly production rates.

A closing section of the book is devoted to cost and production control methods with numerous reproductions of chart and form material which has proven highly practical under actual operating conditions.

The book has been published in a limited edition and will be placed without cost in the hands of operating officials who are engaged in the industry. Additional copies are listed for sale at $2.00 per volume.

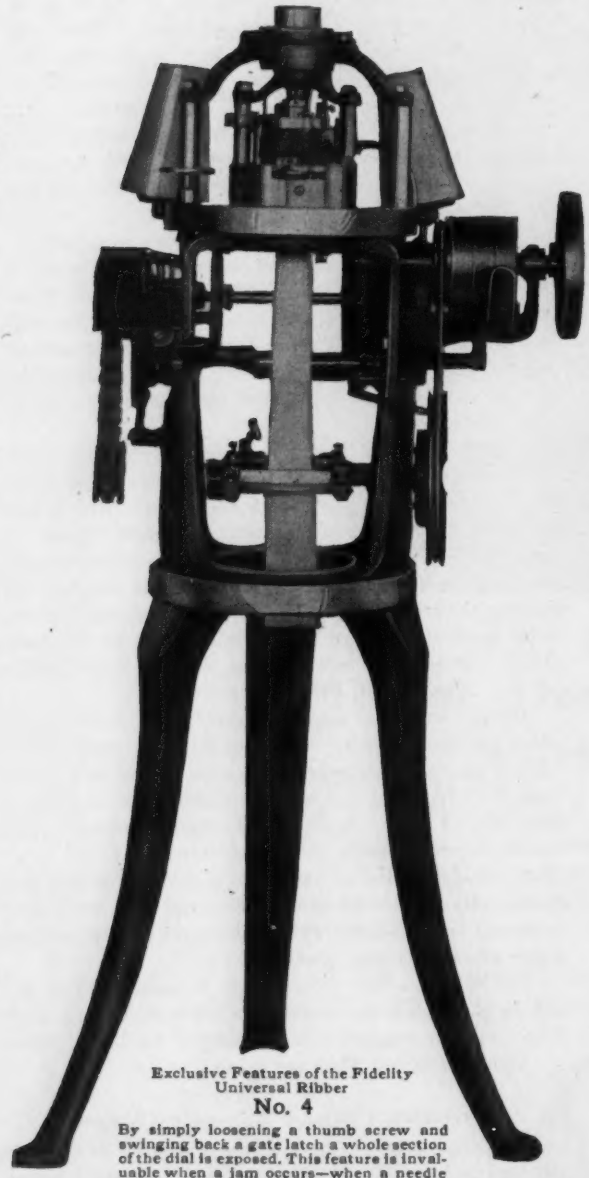
Torrington Company Announce Changes.

Wm. C. Wiechardt, the sales representative of the Torrington Company (of Torrington, Conn.) in the Pennsylvania state territory has succeeded L .R. Unruh as secretary and sales manager of The Torrington Company (Pennsylvania Corporation) who resigned. Mr. Wiechardt will be in active charge of sales at the Philadelphia office.

New Office Location.

Rohm & Haas Company have removed their Philadelphia office to 222 West Washington Square. This change in offices took place on May 7th.

Strength in Every Line!



Exclusive Features of the Fidelity Universal Ribber
No. 4

By simply loosening a thumb screw and swinging back a gate latch a whole section of the dial is exposed. This feature is invaluable when a jam occurs—when a needle bends or a dial wall is to be straightened.

Strength...
Sturdiness...
Stamina...

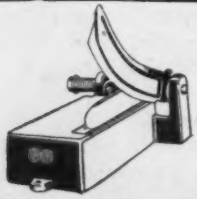
◆ ◆

THREE words that sum up the salient features of the new Fidelity Ribber and which, together with the many well-known exclusive Fidelity features make it truly the "latest development in circular ribbers".

◆ ◆

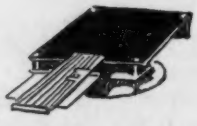
FIDELITY MACHINE COMPANY
3908-18 Frankford Ave., Philadelphia, Pa.
120 Broadway NEW YORK CITY
James Building CHATTANOOGA, TENN.

THE FIDELITY UNIVERSAL RIBBER

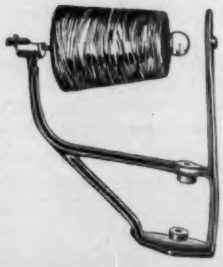


The Fidelity Foot Power Top Cutter for cutting tubular fabric to length. An efficient and sturdy machine that will reduce cutting costs.

Fidelity Super Cone Thread Guides made in porcelain and aluminum eliminate thread breakage and stopping of machine.



The Steere Cuff Turner makes a quicker and more uniform turn and pays for itself out of what it saves in a very short time.



Fidelity Cone Holder Attachment accommodates the bobbin in a horizontal position which prevents yarn dropping below the cone and becoming entangled, causing yarn breakage.

We invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packng and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All accepted contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statements of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

Figuring Costs on Full-Fashioned Work.

EDITOR COTTON:

As a seamless hosiery manufacturer who has recently gone into the manufacture of full-fashioned products, I want to ask a question, through your "Knitting Kinks" department, of the mills who have had longer experience on this class of work.

I want to know an accurate, dependable way for figuring costs on full-fashioned hosiery. In the seamless department, we can weigh our yarns and figure the costs in this manner, but I find that the full-fashioned proposition presents a multitude of variables that I have been unable to surmount satisfactorily, and I would like to have some help. The nearest I can come to it is to weigh the yarns, figure the amount of cotton and silk yarns used, estimate, after knitting, as to when the silk is at the same moisture content at which I bought it, and make allowances and figure it in that way, but even then I am not sure I am accurate.

For this reason, I should very much appreciate having some full-fashioned manufacturer describe how he figures his cost. Please understand, I am not asking for cost figures; I simply want to know a good method of figuring the cost. I shall appreciate information along this line.

CONTRIBUTOR No. 182.

Back-Winding Yarn.

EDITOR COTTON:

I note, through your "Knitting Kinks" department, that "Contributor No. 242" would like to know how other full-fashioned hosiery mills are handling the problems of back-winding yarn.

The writer's experience in the handling of back-winding has indicated that the most economical method is to have the knitters run the yarn off the cones as far as possible.

The main reason for this is that yarn wound the second time never runs as well or produces the same fine fabric as when wound only once. This applies to raw or natural yarns, or yarns dyed before being knitted. Another reason is that the additional cost of re-winding is usually double the cost of winding the first time, because the small amount of yarn on each cone means more knots to be tied. A third reason is that running the yarn off the cone as far as possible avoids an accumulation of backwinds, as, no matter how one has this regulated, there are times when this accumulation will exist.

In the making of "dipped dye hosiery", re-winding causes stickiness, and several tests that the writer has made show that after dyeing hosiery, made from re-wound yarn, the fabric shows a slight abrasion, evidently caused through the fabric not moving freely on the needles. The fabric also shows an uneven stitch across the fabric, which, no doubt, is caused by the yarn sticking, thereby causing an uneven tension when the thread is drawn across the "sinkers."

A few years ago a mill had quite a number of complaints about its hosiery breaking out in various places, when worn. One of the tests we made, to determine the cause, was to dye a quantity of hosiery made from re-wound yarn. We found, while knitting this yarn, that any slight roughness in the needle or sinker, caused a roughness in the stitch and the stitch appeared as if it had been what is called "trapped" and the filament looked as if it had been broken. After boiling off this particular lot of hosiery, we found that the place showing a roughness would break out when pulled.

We tried freshly wound silk on the same sections that had showed roughness, and no signs of roughness appeared, also the hose, when boiled off, were perfect and could not be broken off when pulled.

Of course, it is economy to backwind the remainder of the yarn left on cones, but, the amount of yarn saved is usually very small and each mill, as a rule, has some special place or method, for using such yarn over again.

Some mills, that make several styles, using various size threads, arrange so that all yarn that is re-wound is used in the toe of the foot, on some of the style numbers. This eliminates the danger of tender spots occurring in the main part of the hose; also it causes no seconds, because of the numerous knots tied in re-wound yarn.

Using back-wound yarn in the toe works very satisfactorily, as the toe is usually made loose and allows the stitch to move freely on the needles; and the knots from tying short ends do not come up frequently because of the small amount of yarn needed for making a toe.

When yarn is used in this manner, the cones should be

BLEACHERS!

Can Cotton be bleached with Solozone?

Yes it can, and should be, if you want
strong goods,
soft goods,
permanently white goods.

But the Solozone bleach costs more?

Not necessarily. So many costly operations, so much water and power can be cut out, and so much damage and unevenness avoided that the difference in cost, if any, is negligible.

How can I investigate without much trouble?

Write us. We will indicate how to arrive at a definite conclusion Without much trouble or expense.

THE ROESSLER AND HASSLACHER CHEMICAL COMPANY
713 Sixth Ave. New York, N. Y.

wound small enough so that the knitters can use all the yarn on a cone, within twenty-four hours.

The contributor asks the question if it is better to clean the cone to within one-fourth of an inch of the core and then back-wind. The reason that this is not good policy is that the top surface of the yarn becomes ruffled and when the winder tries to find the end, to start re-winding, she usually makes considerable waste. Tests that the writer has made, showed that the amount of waste, made through trying to find ends, is greater than if the yarn is run off as far as possible by the knitter, and then the balance of the yarn is pulled off and considered as waste.

There is one important thing in connection with the running off of yarn as close as possible, and that is that the cones should be in perfect condition at all times, so far as "smoothness" is concerned, so that the yarn can be run off to the last few yards. Poor cones cause "press-offs", because if the surface of the cone is rough or sticky the yarn will catch on the roughness or stick to the cone. "Press-offs", of course, create waste so this should be looked after at all times.

N. M. (PA.)

A Looper Difficulty.

EDITOR COTTON:

Will some of the readers of the "Knitting Kinks" section advise me what makes a drop stitch on the inside of a stocking looped on a 26 point Soteo looper that has the half stitch—that is, the needle gets the last half of the stitch and misses the first half as the needle enters the point? Any information on this subject will be appreciated.

D. C. (N. C.)

The Best Way to Handle Press-offs in Full-Fashioned Knitting.

EDITOR COTTON:

In answer to the question asked by "Contributor No. 181", in reference to "press offs" in full-fashioned knitting and the most economical way of disposing of them.

This matter has been discussed many times by men who control or supervise full-fashioned mills and the general opinion is that this is a problem that must be decided by the individual mill as to the best and most economical method of disposing of so called "press-offs."

My experience has been that in disposing of "press-offs" in general it is necessary to "top-back" as well as back-wind in order to reduce the excessive loss caused by waste from this cause. In "topping-back" the knitter should only "top" such stockings as are spoiled in a way that very little unraveling must be done. As illustrations, take a stocking spoiled in the splicing. This should be "topped-back" at the beginning of the splicing. A stocking spoiled in the heel should be "topped-back" in the heel that has been spoiled. A stocking spoiled before the leg narrowing or in the leg narrowing should be "topped-back" at the same length as the spoiled point, providing the amount of fabric after the spoiled point does not require too much unraveling, thereby causing considerable waste.

Any stocking that is spoiled and it is found that it would mean considerable unraveling before it is fit to "top-back" should be back-wound rather than have the knitter "top-back", as the cost of back-winding such a stocking is much less than the loss of waste through unraveling.

Back-winding should be done by an operator who understands how to find ends, otherwise it will become an expensive operation and, therefore, would not pay. A careless or inexperienced operator would waste, through unraveling to find ends, just as much material as a knitter would waste by unraveling in order to "top-back" the stocking below the spoiled point.

Back-winding can be done on the cone winding machines and this, in my opinion, is the most economical way of back-winding. The yarn should be run over a trough and roll containing a solution which penetrates through the yarn quickly, so as to remove all kinks in the yarn. If this is done, there is no difficulty in using the yarn over again, as it is the kinks that cause the yarn to run unsatisfactorily and the removal of the kinks will eliminate this trouble. Also, do not run the yarn through the cleaner, as this causes the yarn to cut at times, because of the kinky condition.

In summing up my answer, I feel that there are three things one must solve to avoid loss caused through "press-offs":

First: Find what is causing the "press-offs" on the knitting machines and try to rectify the trouble. Many things cause "press-offs" and, if careful investigation is made and a watch kept continually as to the general cause, this can be reduced.

Second: Try to make the knitters realize that unraveling means waste and that they can save material by "topping-back" only such stockings as do not require much unraveling.

Third: Have the stockings back-wound by a careful operator and see that the kinks are taken out through moisture. Make small cones and have the knitters use the yarn as soon as it is wound, so that there is no danger of the yarn becoming too hard on the cones because of it standing too long in a wet condition before being used.

CONTRIBUTOR NO. 642.

EDITOR COTTON:

Regarding the inquiry of "Contributor No. 181" with reference to the most economical method of handling "press-offs" will say, I have given this considerable thought during my many years of experience in the full-fashioned game, and after making many tests have come to the conclusion that the most economical way is to back-wind the "press-off" no matter at what point it may occur. However, I am sorry that I cannot furnish you with the facts and figures showing how I have arrived at the foregoing conclusion, or do I know of any one who can.

I trust that this may be of some value to the readers of COTTON.

I. G. (PA.)

EDITOR COTTON:

Replying to the question by "Contributor No. 181" in COTTON.

We are interested in producing good hosiery. Back-wound yarn does not promote that interest! Topping back "press-offs" is therefore the accepted practice with me regardless of the point at which the press-off occurs.

In practice the knitter accumulates press-offs which he ravels back to uniform lengths, or he accumulates press-offs of uniform lengths until he has enough for a full set.

A Really Great Reputation

Is built on character — never by accident

ATWOOD MACHINERY

SILK & RAYON

1811 1853

THROWING MACHINERY

IN the silk and rayon throwing industry the name of Atwood is a synonym for machinery par excellence. In developing the genius of its products, wrought from sound experience and intimate knowledge of operating requirements, Atwood has won world recognition for its throwing machinery as "models of perfection."

Imperial representatives from the great silk throwing industries of nations in Europe, of India, South America and Japan have crossed the oceans for the sole purpose of studying Atwood products in the plants where they are built. The direct outcome of these visits has resulted in shipments for the complete outfitting of plants in foreign countries. That every important silk throwing center in America and on the other side of the world have universally accepted Atwood gives proof to the significance of the character behind the organization.

ATWOOD MACHINE COMPANY

Water Street Stonington, Conn.

Southern Representative
W. A. KENNEDY, Johnston Bldg., Charlotte, N. C.

New York Office
267 Fifth Avenue, New York City

Western Representative
E. G. PAULES, P. O. Box 67, Inglewood, Calif.

He also keeps press-offs on hand that have been raveled back to a point where it is suitable for replacing a press-off when it occurs, thus filling in with press-offs from previous sets to keep the set complete and to avoid running one or more sections of the machine idle.

I shall be glad to learn of the opinions of other men as derived from their manufacture experience.

O. E. (WIS.)..

EDITOR COTTON:

Answering "Contributor No. 181" in regard to "topping-back", wish to state that our experience has been that it is better to "top-back" all "press-offs" rather than to back-wind silk, as back-wound silk cannot be used in knitting "firsts", and to manufacture sub-standards is not a paying proposition.

The method which we have found best is to have each knitter "top-back" and knit his own press-offs, keeping handy his press-off stock, and working it up as the opportunity arises.

We do not put a press-off back on the machine during the time the machine is narrowing, as this entails too much trouble and loss of time, but if the press-off was made during narrowing, we top-back beyond that point. For instance, suppose the machine presses-off on a stocking, the operator at once selects from his stock of press-offs one which is topped-back beyond that point and then completes knitting that one. Should he, at the time the machine is changed over to another quality or number, have an accumulation of press-offs, he works them all up at one time before the machine change is made.

N. D. (N. Y.)

Dyeing Two Fiber Hose.

EDITOR COTTON:

In a recent issue you published a question from "Contributor No. 1505", who reported difficulty in getting even dyeing on a stocking made of rayon with cotton heel and toe and welt. He gave the various methods he has been using up to his present system. The cotton parts of the stocking, he said, did not take the dye evenly, and the samples, he sent, which were forwarded to me, bear him out on this.

I will endeavor to offer a solution for his trouble. The hose in question seems to have been dyed in "hard" water, and his last method of entering the dyestuff at 149 to 158 degrees Fahrenheit (65 or 70 degrees Centigrade) gives the cotton heels and toes very little chance to be evenly penetrated, as the dyestuff will rush onto the rayon leg of the hose first. My first suggestion is to get his shades matched up with the very best fast-to-light colors on the market. I would recommend colors of a type such as the Solatine or Pontamine direct dyestuffs. Dyestuffs of this class if previously boiled up and entered as per the directions below, will do away largely with his troubles of spotted heel and toe and streaked dyeing. He should previously boil out the hose, as the two-bath method, though slower, is much safer and gives a better feeling and better dyed hose. The following is the procedure:

Enter the hose in the compartment of the rotary machine so that the compartment is only about half full, and add, according to weight, 3 to 4 per cent sulphonated castor oil solution (that contains 5 per cent pine oil) and 2 per cent modified soda ash or 3 to 4 per cent tri-sodium phosphate. Boil this hosiery for 40 minutes to one hour. Give two warm washes, and if preferred, extract the hose. They are then ready for the dye-bath.

Enter 3 per cent Monopole or sulphonated castor oil or 4 per cent Monopole soap. The first oil is preferred, and one containing 5 per cent pine oil is best. With this oil add the dyestuffs, previously dissolved in boiling hot water, and ¼ per cent soda ash to aid solution if necessary. Bring the bath up to about 1 to 20—that is, for every pound of hosiery use 20 pounds of water in the dye-bath. Enter the previously boiled out hose, which should be untangled and each compartment only half filled. The temperature of the dye-bath should not be over 150 degrees F. (About 65 degrees Centigrade). Now bring the dye-bath up to boiling point (100 degrees Centigrade) in 20 minutes, boil 10 minutes, add 5 per cent (by weight of hosiery) of Glauber's salt. Boil 15 to 20 minutes, add 10 to 40 per cent common kitchen salt, boil 20 minutes, or or long enough to secure the desired shade. Give a cold rinse, and if goods are not soft enough, add 1 to 2 per cent sulphonated castor oil or olive oil.

Should the formula of dyestuffs used still fail to give sufficient penetration in the heel and toe, I would have the grey shades matched using Black LN, Catechu 3G or GN; the orchid shade using Violet R or B and Red 8BL; and the peach shades using Catchu 3G, Black LN and Red 8BL or use Orange EG.

CONTRIBUTOR NO. 649.

EDITOR COTTON:

In a recent issue of "Knitting Kinks", the problem of uneven dyeing was brought up by "Contributor No. 1505", who submitted some samples showing the difficulty he referred to. I suggest that readers refer back to his question, which appeared on page 728 or the May issue, in order to learn of the conditions he outlined, and in order to describe the samples, I am giving some information regarding them so the reader can visualize the difficulties being discussed without the opportunity of seeing the samples themselves.

The samples submitted were three: a medium grey, a light tan and a dark lavender. They are knitted of rayon, with toes, heels and tops of mercerized cotton, and on the inside of the welt there is a strip of cotton not mercerized. The rayon on all three is dyed quite evenly, the mercerized part of the stocking has taken the dye very unevenly. The grey sample is spotted on both sides of the heel, showing that a little red had reached there, but no grey on it. It looks pinkish instead of grey, and this appearance is very prominent for the size of a dime. The toe and top are also somewhat uneven, and the cotton is too brownish for a good match with the rayon.

The light tan and lavender are also spotted on the heels and are much more uneven on the toes and tops. On all three stockings I found that the cotton on the inside of the welt was lighter than the rest of the cotton of the welt outside, the heels and the toes but that I believe is because this cotton is not mercerized like the rest.

This contributor is having a trouble common to many a dyer of hosiery. He did not mention the make of his machine in his letter as published. This does not matter particularly, as all of them are on the same principle. Every firm making rotary dyeing machines is constantly improving them, taking advice largely from the dyers who use

them. However, this contributor did not state at what speed his machine rotates, that is, how many revolutions per minute. I cannot say that this is having any effect, but I do know that we had some faulty dyeing which we corrected simply by increasing the speed of the rotating drum from 3½ to 6 revolutions per minute.

Overloading of the machines is the cause of a good many bad lots, but this hardly is the case here, because this man states that he puts only 20 dozens in the machine, and it is a small machine indeed that would not with ease hold five dozens in each compartment.

Sometimes we have found that the toes had come out of the dyeing badly shaded, and we traced that to the inspector, who had stripped the stocking from the inspecting board with the toes turned in, causing a knot in that part of the stocking too thick for the dye to penetrate easily.

(If this contributor will read "The A B C of Dyeing" which is appearing in COTTON, he will find good information of help in connection with his problems.)

Taking up the samples, I can see that they are dyed with good dyes, but in my opinion the application is faulty. From what he says, it appears that he boils and dyes in the same bath. He does not say how he cools the bath from 212 degrees F. to 149 degrees F. Maybe he lets some of the bath out and adds cold water, or maybe he lets the motion of the rotating drum reduce the temperature as desired. The starting operation which he describes is, in my opinion, correct, and I presume he does that to clean the goods and to wet them. Now, why not let all that bath out and start a fresh one? He uses such a small machine that it seems to me the cost of time, water and steam is insignificant.

In a fresh bath for 20 dozen stockings, I would suggest raising the temperature to 100 degrees F., adding two ounces of something like Tetracarnit, a half a pint of sulphonated castor oil, 50 per cent strength, and, after a few revolutions to cool the goods evenly enter all the necessary dyestuffs, previously well dissolved, raise the temperature slowly to the boil and close the steam. Running the goods in this bath for about 20 minutes, the dyestuff is distributed thoroughly and evenly, and it is not exhausted from the bath.

At this point "Contributor No. 1505" must learn at what temperature he can put the salt in the bath for best results, keeping in mind that rayon dyes best at the boil and cotton dyes best at about 160 degrees F. I believe he knows something about that because from the samples submitted I see a good union between the two fibers. Different dyestuffs go onto the rayon at different temperatures. When that is settled, add to the bath the necessary salt, from 5 to 30 per cent Galuber's salt, or one-half that amount of common salt, preferably in two portions, if necessary. In fifteen minutes after entering the salt it is time to take out a sample. The rest is easy.

When dyeing in the open vats and poling the goods, he was getting better results because the hose were exposed to the dying all at the same time, while in his machine dyeing the goods do not have the chance to open up but roll up more or less in a ball, and what is in the center has a hard time getting in contact with the dye, and if something is not done to keep the outside hosiery from taking up all of the dyestuff, by the time the former has had a chance to get some, there is none left in the bath. Something like the Tetracarnit mentioned will do that. It retards the absorption and helps the penetration of the dyestuff.

With reference to the use of nets, it seems to me that in dyeing such tender fiber as rayon he should use them, but they will not help him in getting better, more level dyeing. They only keep the goods from getting tangled up in a big roll when dyeing ladies' hose, and keep the hose from running out of some types of machines. In dyeing large quantities at once it makes the goods easier to handle. I have never dyed hosiery without nets and have used different kinds. My choice is a medium size soft cotton, with ¼-inch mesh.

CONTBIRUTOR No. 650.

How May These Oil Spots Be Prevented?

EDITOR COTTON:

We have been troubled with oil spots on the instep of the hose, and in the gores of the heels and toes. This is shown by the sample accompanying.

These spots are the direct result of cleaning out the cylinders, filling them in with new needles and sinkers. We have taken particular pains to be sure the cylinders were free of oil, cleaning them with gasoline. The needles are free of oil, save a little on the butts of the needles to keep them lubricated. The same is true with the sinkers.

We understand these oil spots are caused during the process of knitting the heels and toes, the long butt needles being thrown up out of action, while a part of the short butts which knit the gores are being thrown in and out of action by the pickers. This up and down movement of the needles seems to collect the oil, leaving it on the stitches, resulting in the lines referred to. It is our belief that the oils we use carbonize, resulting in a black substance which collects on the stitches.

We would like to hear from those familiar with this trouble, as to what they have done to overcome it, and what solution of oil is best to use for lubricating to aid in reducing these spots to a minimum.

CONTRIBUTOR No. 4256.

Experimental Departments.

EDITOR COTTON:

Experimental work as defined by Mr. Webster, is "to discover some unknown fact, principle, or effect, and to establish it when discovered, by trial."

How many of the large industrial organizations today would have progressed so rapidly had it not been for their experimental departments for trying out various methods and processes before putting them into operation on a large scale.

Had this not been done, and some method which had been put in practice found impracticable, the loss, in many cases, would have been enormous. And that is the value received from experimental work, finding out what method or principle is best to use before putting it into operation.

It is, however, regrettable to see in many hosiery establishments how the real value of experiment, together with the proper facilities for carrying on this work, has been received. Too little of it is being done. More experiments are needed to find better ways of doing many of the things that are being done at the present time.

A few of the larger hosiery organizations have progressed because they have found it to be a known fact that to have a more efficient organization, with increased profits, it is necessary to keep one step ahead of competition. And they have done this by experimental work, setting aside an appropriation for the year of a certain amount for the use of the engineering forces necessary to carry on this work.

The management's viewpoint on this subject in many cases has been narrow. They have not given this subject enough attention, spending most of their time and resources on the regular routine methods already in practice, and giving little thought, if any at all, to experiment, especially in the manufacturing division of their plants.

As everyone knows, the demands of fashion in the hosiery industry is ever changing. In order to be a leader in the field, one must be ready, and have whatever information is needed, to take care of these demands. To do this, experiment is needed in advance of these demands.

In those plants which contemplate going more into experimental work, there are several things to be taken into consideration before so doing. It should be remembered, that the present personnel, in most organizations, have their certain functions to perform. To have these employees start in doing experimental work, together with their present duties, would be doing the wrong thing, unless of course, they have sufficient time for carrying on this work.

In the manufacturing division it is advantageous to have an experimental room, or some part of the plant where this work can be done. For carrying on experiments such as working out new styles, changing designs of machine parts, or finding out the advantages or disadvantages of the many problems that come up in every hosiery plant, some one should be selected from the personnel, who understands the problems that arise, and can carry on these experiments without being disturbed. The proper facilities should be supplied so that every problem can be completed without delay.

CONTRIBUTOR No. 431

Keeping a Record of Machine Overhauling.

EDITOR COTTON:

I am sending in an idea for "Knitting Kinks" that may prove of some value to others, as it has to me.

I have found that in taking care of a considerable number of knitting machines it is a very good idea to have a systematic overhauling of the needles, sinkers, cams, etc., at regular intervals, on all the machines. In order to do this it is a good plan to have some method of recording when, and by whom, the work was done.

In our mill we have a head machine fixer, second man, and also a boy whose principal duties are cleaning machines. Now the method we have used for some time is a form of chart which gives a record that shows very quickly just what the conditions are.

The sketch shows very plainly the way it works out. This chart can be made to take care of almost any number of machines, and for most purposes a record that is accurate to a week is very practicable. As the sketch shows, the week-end dates are shown across the top, and the numbers of machines shown on the left-hand side, reading down.

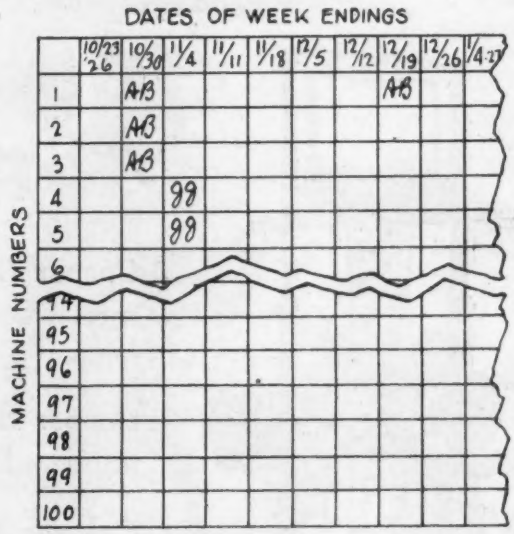
When a machine has been overhauled by the cleaner, he goes to the chart and puts his initials in the square that is at the intersection of the date and machine number line.

Then when the machine is cleaned a second time, it shows very clearly just how long it has been since it was overhauled the last time.

We formerly used a loose-leaf binder holding one sheet for each machine and numbered in the same way, but find the present method much better.

We also found that a systematic cleaning and sorting of needles, etc., raised the quality of the work higher than the old method of cleaning machines when they began to give trouble, and it quite frequently happens that *several* of them start making trouble at the same time, which confirms the old adage, "that it never rains but it pours."

One may often take down a machine that is working perfectly, only to find conditions that are sure to cause



trouble very soon. Loose rivets, rough cams, etc., which, if taken care of before trouble starts, usually avoids or prevents the trouble.

This record sheet can be elaborated so as to include other details such as stop motion work, whether new needles were put in, or sorted needles, etc. By the way, at our place we find that it is a poor plan to mix needles, so when we sort over used needles we always save them until we have enough to completely fill a machine, and such a fact can be indicated by some symbol and marked in the same space with the initials.

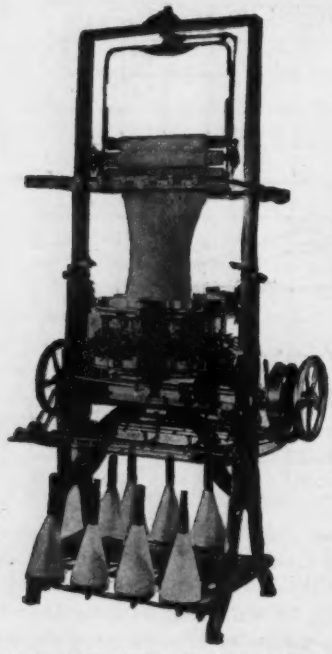
I am always looking for ideas in COTTON, and I find many such ideas that are helpful from time to time.

CONTRIBUTOR No. 567.

A Convenient Sinker Ring Clamp.

EDITOR COTTON:

Those having Scott & Williams machines know that the inside sinker ring is soldered to the needle cylinder in order to hold it in place. It is necessary at various times that some of these inside rings have to be changed due to different causes, such as being warped, getting loose from cylinder, or being broken. After the old sinker ring has been taken off the cylinder, all surplus solder and grit is scraped from the top surface so that it is perfectly clean.



Spring Needle Rib Body Machine

Cooper Latch and Spring Needles

Cooper Latch Needles are now being produced from special High speed wire which takes a more uniform temper.

Cooper Latch Needles are now all equipped with the improved ***Non-Turnable Rivets.***

Cooper Latch and Spring Needles are used by the leading mills in the Textile World.

Try Cooper Needles and be convinced of their superior quality, finish and detail.

Oldest Makers of Spring Needles in the United States

From a hand-made, sparsely produced needle, the Cooper Line of Spring and Latch Needles has grown with the textile industry into the most complete in the United States. As the first manufacturers of Spring Needles we have retained a life long prestige—accounting for the fact that Cooper is to Needles what Sterling is to silver.

Charles Cooper Co.

Machine and Needle Works

Bennington, Vermont, U. S. A.

G. H. ROGERS, Traveling Representative
877 Warren St., Albany, N. Y.

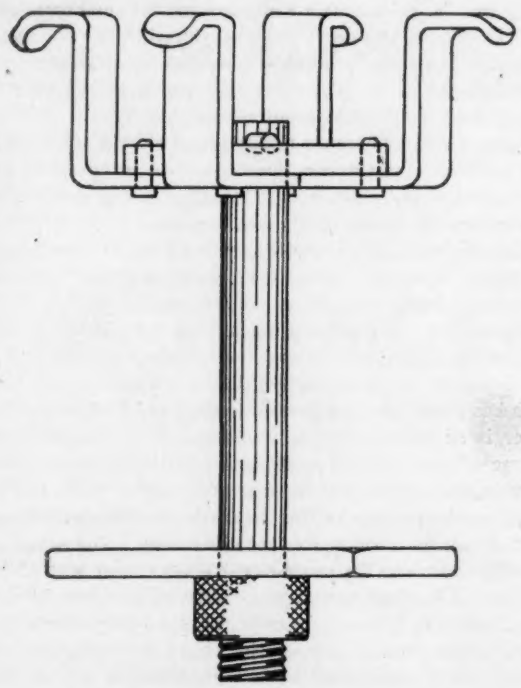
J. A. WILLARD CO., INC., Southern Representative
Greensboro, N. C.

Agents: MELLOR, BROMLEY & CO., Ltd., LEICESTER, ENGLAND.

ELBROOK, INC., 50 Peking Road, Shanghai, China Agents for China and Japan.

The new ring is inserted on the needle cylinder, and if some means is not used to hold it rigid while soldering, the cylinder needles will not line up with the slots in the ring, resulting in its having to be removed and re-set.

In the accompanying illustration will be found a drawing of a clamp which I have used extensively on Scott & Williams machines for holding the ring down square and



rigid so that a well soldered joint is secured. It is also applicable on other makes of machines. The shaft used in this clamp is one of the old style dial shafts which is used on the Scott & Williams K machine.

When inserting this clamp on the cylinder, a piece of card board should be placed underneath each of the four prongs, so they will not injure the top surface of the ring when clamping.

CONTRIBUTOR No. 840.

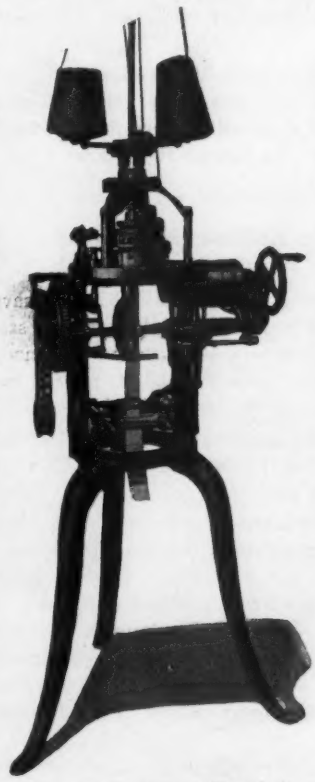
A Production Problem.

Whether four full-fashioned hosiery machines can be operated by one expert knitter with a helper for each machine, as a means of eliminating waste of man power, is to be determined shortly by a manufacturer near Philadelphia, according to a statement in which he points the need for more rigid economy in order to compete successfully under current conditions as to supply and demand. It is common in the Philadelphia territory for one knitter to man two machines, with one or two helpers. The manufacturer who has plans well matured for experimenting with one operator and four helpers for four machines says he believes this will be no less difficult, with strictly modern equipment, than was the one-machine plan, and a helper for each two machines, with the equipment of earlier periods.

The mill man who is going to solve the four-machine plan problem says he is paying an average of $80 a week to a man operating one machine and producing an average

Why Are
BRINTONS
More Economical?

—Because our factory tests under actual production conditions reduce installation delays and expenses to a minimum. Then, too, you can look forward to many more years of service before costly replacements are necessary. Brintons produce the better quality — and serve longer.



We will be glad to furnish information of our complete line.

H. BRINTON COMPANY
3700 Kensington Avenue Philadelphia

BRINTON CIRCULAR KNITTING MACHINES

Great Britain and the Continent: Wildt & Co., Ltd., Leicester, Eng.

South America: Santiago Scotto, 15 de Novumbre 1899, Esq. Pozas, Buenos Aires, Argentine Republic.

FOREIGN AGENTS

Australia: J. H. Butter & Co., Sydney, Melbourne.

China and Japan: Elbrook, Inc., 50 Peking Road, Shanghai, China.

of 11 dozens of hose a week. In elucidating his proposal, he says: "To get a production of 44 dozens a week under the one-man machine plan I would have to have four knitters, who would draw an aggregate of $320 a week. Now, a good machine does not require the attention of an operator, with no helper, more than 20 per cent of his time. When I employ a knitter to run four machines I will be willing to pay him $100 a week. I estimate that each helper would receive $15 a week, his pay increasing as he became more skilled. The one knitter and four helpers would draw as a total around $160 a week, instead of the $320 we now are paying. As the helpers became skilled their pay would be increased, of course, and eventually the more adept and painstaking would become full fledged knitters, and perhaps become a part of the mill organization. I would be training help for employment in our own mill, just as a mill I know of is doing, having no others in its employ. It can be done," he said, "and I propose doing it."

This daring manufacturer makes the prediction that unless Philadelphia "breaks with the union" or establishes changed working relations there will be very few full-fashioned mills in the city at the end of five years.

Among the Knitting Mills.

Officials of the Ipswich Mills, Ipswich, Mass., have been South with the view to locating a plant in that section, and it is understood that arrangements have been made with Robert & Company, engineers, Atlanta, for the engineering work when the site has been determined.

Manufacture of half-hose has begun in the plant of the S. S. Miller Hosiery Mills, Burlington, N. C. This is a branch of the Reading company.

D. B. McCrary and associates of Asheboro, N. C., will erect a plant for the manufacture of full-fashioned hosiery.

It is understood that the Forest City Hosiery Mills, Forest City, N. C., will install full-fashioned equipment.

Hudson Silk Hosiery Company, Charlotte, N. C., full-fashioned manufacturers, will add to the present equipment.

A new building, two-story, 60 x 120, of mill construction, will be erected by the Maurice Hosiery Mills, Thomasville, N. C.

Carolina Knitting Mill, Burlington, N. C., has been organized by W. A. Ball, S. G. Moore and M. B. Smith.

Weiss Hosiery Mill, Cleveland, Tenn., has been purchased by Clyde Wilkins, president of the Champion Knitting Mills, Chattanooga, and Shreve and Adams, selling agents. An addition will be erected, and the mill name changed. The plant will be under the management of Mr. Wilkins, who continues his connections in Chattanooga as well. When the enlargements are completed, the plant will have a capacity of 600 dozen pairs of hose daily.

Unionwear Corporation, Union, S. C., will erect a plant for the manufacture of underwear. S. M. Edelstein, of Brooklyn, and H. M. Arthur, of Union, are among the incorporators.

Waldensian Hosiery Mills, Valdese, N. C., will erect a two-story, 50 x 100 foot addition, in which full-fashioned hosiery will be manufactured.

Ray Hosiery Mills, Inc., Asheville, N. C., are now manufacturing half-hose. The equipment includes 50 knitting machines, ten ribbers, eight loopers, with dyeing, bleaching and finishing machinery.

Victory Hosiery Mills, Burlington, N. C., are installing 100 knitting machines for novelty hosiery work.

Plans for the enlargement of the plant have been announced by the National Dye Works, Burlington, N. C.

It is understood also that the May Hosiery Mills, Burlington, N. C., will double the capacity of the manufacturing plant. J. E. Sirrine & Company are the engineers.

Miller-White Hosiery Mills, Taylorsville, N. C., have been organized. T. H. Miller is president, J. A. Miller vice-president and G. A. White secretary and treasurer. Half-hose will be the product manufactured.

One new full-fashioned hosiery plant started production in Philadelphia last month, another will be in operation by the end of June, and a mill for making spring needle silk hosiery will be producing in a few weeks.

The Whitehall Hosiery Mills, with an initial installation of twelve 42-gauge 20-section machines, and 13 to be added, began with its production to the end of July contracted for by another Philadelphia manufacturer. Of the four principal owners, each of whom is an official of the company, three are expert full-fashioned knitters and each has a son who is a knitter in the same field, while the other is an experienced dyer and finisher, formerly in charge of that class of work in a local mill. One of the knitters some little time back was an erector of full-fashioned machines for the Textile Machine Works, Reading, from whom the plant equipment was bought. The company therefore employs no professional erector, and within the families of the four executives a sufficient force for operating the mill as at present constituted could be recruited for running the plant, it is stated by Harry A. Kelly, the secretary. In the layout of the factory, provision is made for a 60 per cent expansion.

The Vogue Silk Hosiery Mills are being equipped with Reading machines, of which 16 eventually will be in operation. Two units will be producing before July, and it is stated the output for the first two to three months is practically sold. The owners are Samuel and Robert Tait, brothers, who drew out of the Howard Hosiery Co., which now is operated by their four brothers. The Vogue output will be 42-gauge chiffon hose silk to top.

The seamless mill added to the Philadelphia hosiery industry is that of the Penn's Valley Hosiery Mills, where the first of 100 spring needle machines are in operation. The company is knitting 260 needle silk hose and one of their numbers carries an ingrain black heel on white and gun metal leg.

Having bought the factory building in Phoenixville, Pa., formerly occupied by the Buck Underwear Co., the Phoenixville Hosiery Mills are installing 12 Reading machines of 43-gauge, 20-section, most of which will be in operation in July. The president of the company is Paul Bubeck, recently resigned as president of the Ajax Hosiery Mills, Philadelphia, which has contracted for the entire production of the Phoenixville mill for some months.

Southern Agents for Charles Cooper.

J. A. Willard Company, Inc., Greensboro, N. C., have been appointed southern sales agents for the Charles Cooper Company, Bennington, Vt., manufacturers of spring needle rib knitting machinery and spring and latch needles for the knitting trade.

New Hosiery Combinations.

In going through one of the large hosiery mills a spectator stopped and admired the new type of worsted and rayon combinations in the soft shades of blue, white and gray plaids of medium size, which were running off one of the knitting machines, and some of those operating the nearby machines and proprietor of the plant were somewhat surprised, not to hear the lines admired, but to hear one of the visitors say, "Oh, John, look at the new scarfs for men. Aren't they pretty? But don't you think they might be made a little wider, or are they planning to use them for neckties?"

John made no answer, so far as the spectators knew, but moved rapidly on and was seen to leave his guests at the rear of the room, while he went alone down another aisle to see other designs which the manufacturer was endeavoring to show him. Of course, there was no comment, but that did not prevent much thinking, and the manufacturer declared it gave him a new idea for his advertising campaign.

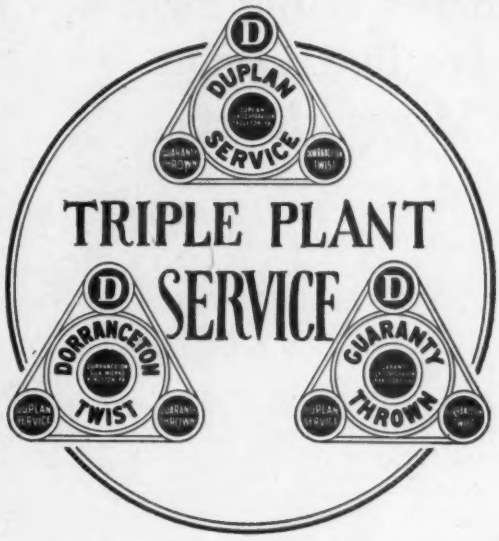
The "scarfs" admired, were worsted and rayon plaid hosiery for men and women, although one could not help but feel as though the woman had a slight chance of believing she saw a "scarf" because of the design and colorings. Truely they were almost "loud enough to talk", even though colors and shades blended softly to one another and were generally in conservative colors. But at the same time they were good looking and buyers were booking orders in good volume for the blues, grays and tans in the predominating color. Some greens were also wanted for both men and women in the same designs and colorings. Black and white were also featured.

Mild weather stimulates the movement of the sports lines and the maker declares that fancies of strong color combination as well as the subdued colorings promise to be more active for summer and fall than the plain numbers, particularly in worsteds combined with either rayon or silk, but generally speaking, the rayon combination is the favorite.

New jacquard machines which have been installed are turning off more intricate patterns and some factors express the opinion that silks will also be made for summer and spring of 1928 in the same designs as the worsteds and in pastel blended plaids, checks, stripes, etc., although the pattern will be such that the colors will fade into one another, a vague outline rather than clear cut, the effect accomplished by the cards, which are being produced in large numbers at the mills at the present time.

The cards are made the same as for the jacquard weaving looms, although they are narrow because of the design. At the moment jacquard looms are attracting much attention, although it is claimed that with the plain silks for dresses the fancy stocking is likely to be most active, and knit goods men are now making the knitted dresses in plain colors on jacquard looms in a distant pattern and it is difficult to distinguish the cloth from the woven material.

W. C. BRADLEY, of Columbus, Ga., has been elected president of the Gate City Cotton Mills, College Park, Ga., succeeding the late Lee M. Jordan. Mr. Bradley is also president of the Eagle & Phenix Mills, Columbus and other industrial organizations.



Rayon
THROWING
SIZING
WARPING

No greater assurance of efficient silk or rayon preparation can be had than in the extensive, well-equipped and conveniently located facilities afforded by

— DUPLAN —

Commission Dept.

DUPLAN SILK CORPORATION

195 Madison Ave.
New York City

Mills
Hazleton, Pa.
Kingston, Pa.
Nanticoke, Pa.

Johnston Bldg.
Charlotte, N. C.

There's A Big Field For Fine Gauge Misses Hosiery

The young school miss of today is every inch a lady, save for her years. From hat to shoes she is as chic as her older sister, especially so, is her hosiery. Fashion says this must be full-fashioned, but Economy often says, "No." As Economy usually wins, the solution is found in a mock-seam hose that looks as much like full-fashioned as possible.

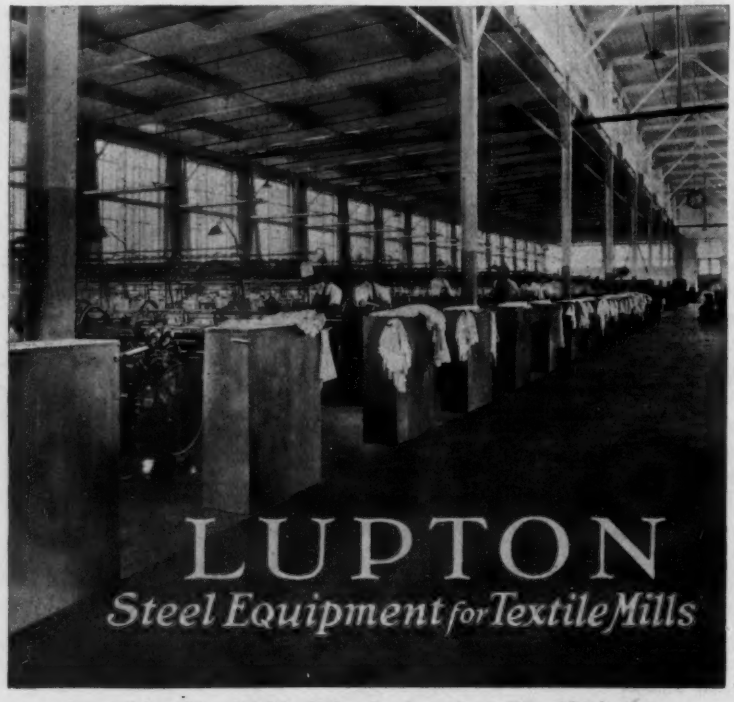
Such hosiery can be made on the Standard H slotted with 27 needles per inch. The operation of this fine gauge machine is reliable and satisfactory. The fabric is comparable with the best in fine gauge hose. This machine is known as Standard H, Style 1, 70 Gauge. It is a single feed, five finger machine, equipped for double sole, high splice and fashion marks.

The Standard Knitter is guaranteed to give a higher production rate than is possible on other machines, and it assures an absolute absence of picker trouble.

There's a full description of the complete line of Standard H Knitters in our Catalog, which you may have upon request.

STANDARD-TRUMP BROS. MACHINE CO., *Wilmington, Del.*

JAMES BLDG., CHATTANOOGA, TENN.



Interior of plant of Oscar Nebel Co., Hatboro, Pa., showing Lupton Knitters' Benches in use.

The modern Knitters' Bench, an aid to efficient production. Dimensions: 41½ inches high, 36 inches long, 12 inches front to back.

Modern Knitters' Benches

YOU'LL see these modern Steel Knitters' Benches in many leading mills. Durably made of galvanized steel, finished in velvet green enamel baked-on, Lupton Knitters' Benches help speed production and reduce seconds. They are easy to keep clean, are free from splinters, and give a lifetime of efficient service.

Ask for a free copy of Catalogue T. E. 881 which shows the complete line of Lupton Steel Equipment.

Lupton Steel Equipment includes Seaming Machine Tables, Looping Machine Tables, Bar Topping Tables, Work Boxes, Steel Shelving, Humidor Cabinets, Drying Racks, Hosiery Trucks, etc.

DAVID LUPTON'S SONS COMPANY
2243-e East Allegheny Avenue . . . Philadelphia

The Guild Trichromatic Colorimeter.

An instrument for the analysis, measurement and specification of color is being marketed by Adam Hilger, Ltd., 24 Rochester Place, Camden Road, London, N. W. 1, England. It is known as the Guild trichromatic colorimeter, being designed by J. Guild, of the National Physical Laboratory, to fill the need for a reliable color measuring instrument suitable for general application. It will be of interest to colorists and others.

The colorimeter consists primarily of a metal box which contain the essential parts of the apparatus. Attached at one end is a lamp with a lens to collect and direct the light. The light, passing from this lens, enters the box through three variable openings, each covered with a glass color screen, which serve as three primary colors which are combined in the instrument in varying proportions at will. The operator looks through the telescope directly at the color to be measured and observes below it, the color composed in the instrument out of the three primaries. Each primary can be adjusted separately by its own adjusting handle, and the operator needs merely to match this compound color against his unknown color by manipulating these handles. When a match is secured, the finished measurements, derived from the final apertures of the variable openings, is then recorded as the amount of each primary constituent. The resulting measurement is thus expressed simply as definite amounts of each of the primaries, red, green and blue. When necessary, it is stated, these results may be subsequently transformed by a simple arithmetical calculation by which they would be referred to a common basis and rendered independent of the instrument primaries.

Atlanta Representative for Saco-Lowell.

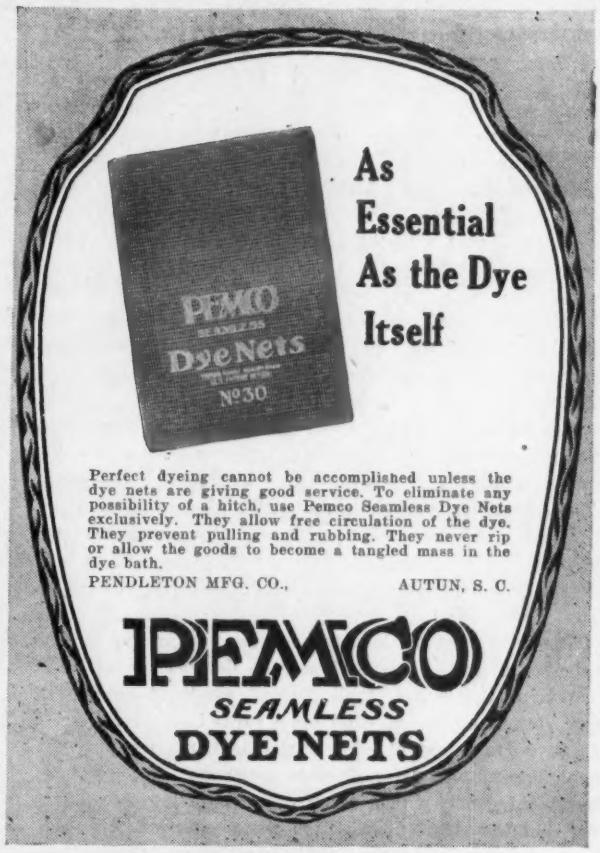
Fred P. Brooks has been transferred to the Atlanta office of the Saco-Lowell Shops, in the Healey Building. Mr. Brooks, who has been with the organization for more than ten years, has been located in the Charlotte office. The Atlanta office was opened some months ago by Walter W. Gayle, who removed to Charlotte as southern agent succeeding Rogers W. Davis. Mr. Brooks is the first agent to locate at the Atlanta headquarters since Mr. Gayle's removal.

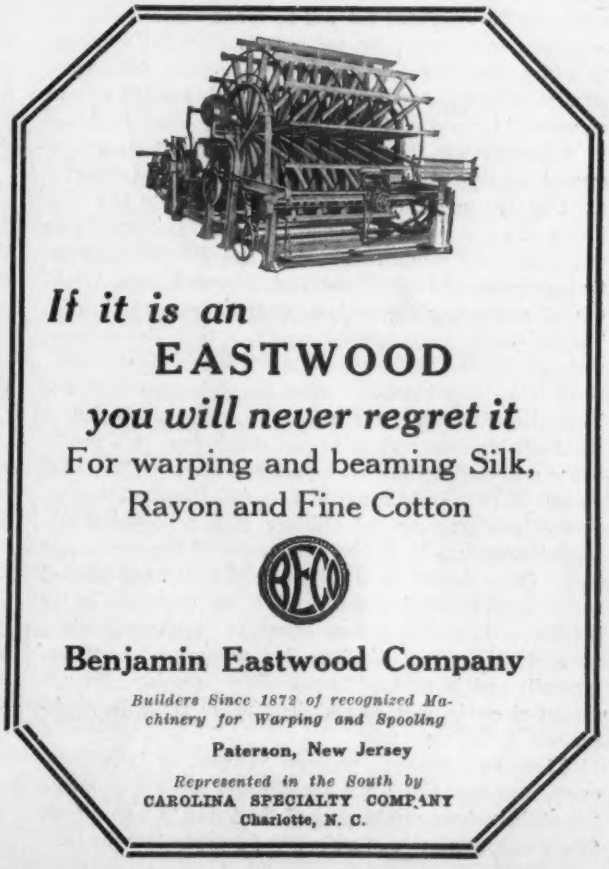
Book on Cotton Goods Dyeing.

The Dyeing of Cotton Fabrics, published by D. Van Nostrand Co., 8 Warren St., New York City. Price, $5.00 per copy net. This is the third edition of the book by Franklin Beech, revised and enlarged by A. J. Hall. This edition has been brought up-to-date by the inclusion of information relating to vat and sulphur dyestuffs, dyeing of artificial silk materials, and some of the newer machinery now employed in dyeing textile materials. It deals with the bleaching of fabrics prior to dyeing, the principles and practice of cotton dyeing, dyeing union fabrics, operations following dyeing, testing colors, etc. It is based upon English practice. Copies may be secured from the publishers or through COTTON'S book department.

Ciba Company Moves Boston Offices.

The Boston offices of Ciba Company have been moved to 157 Federal Street. This change, the Company announces, provides larger office, laboratory and stock room space for permitting quicker and better service.


PEMCO
SEAMLESS
Dye Nets
No 30
As Essential As the Dye Itself
Perfect dyeing cannot be accomplished unless the dye nets are giving good service. To eliminate any possibility of a hitch, use Pemco Seamless Dye Nets exclusively. They allow free circulation of the dye. They prevent pulling and rubbing. They never rip or allow the goods to become a tangled mass in the dye bath.
PENDLETON MFG. CO., AUTUN, S. C.
PEMCO
SEAMLESS
DYE NETS


If it is an
EASTWOOD
you will never regret it
For warping and beaming Silk, Rayon and Fine Cotton
BECO
Benjamin Eastwood Company
Builders Since 1872 of recognized Machinery for Warping and Spooling
Paterson, New Jersey
Represented in the South by
CAROLINA SPECIALTY COMPANY
Charlotte, N. C.

The Yarn Market

Philadelphia, Pa., May 14th, 1927.

It can be said definitely that cotton yarn rates in the Philadelphia market have undergone a positive movement upward to considerably higher planes during the past month—with combed yarns occupying the stronger position as compared with the carded numbers, but withal an increased value all through the list and a firmer position for yarns.

Demand possibly could be considered to have improved somewhat, though the price elevation has been more of the feature development of the period in the market than has any increased activity on the part of buyers.

One time, it will be recalled, nature provided a drought to curtail production for an overloaded market, and now it seems again that it has played its part in this unrelated phase of activity. Tragic in its results, playing havoc with a people to whom the sympathies of a nation are being extended in a most material way, the Mississippi flood has provided the outstanding feature of things affecting textile prices during recent months.

The inundation of thousands of acres of farming lands, including a large portion of acreage devoted to the production of the longer staple cottons, produced an effect upon cotton and consequently upon yarns that carried quotations up to an extent. The curtailment in the supply of the longer staples affected more especially the combed mercerized goods, with a result of strength in these numbers, but the effect upon cotton itself extended also into the carded numbers, and so the general range of prices as quoted in the appended list will be found higher than that prevailing in the list published last month, which appeared at a time when there was an obvious inactivity from every standpoint and the market provided nothing in the way of an unusual interest of development.

With stronger prices following the flood reports, it seemed nevertheless that much of the disaster's effect in the long run upon the textile markets generally had been pretty well discounted by buyers, for outside of that bulge which naturally would follow, there was comparatively little improvement in the buying, such increased demand coming, of course, for the combed numbers, as was intimated. The revision of rates upward came at a time, furthermore, when all hands were admitting that spinners found it difficult to secure replacement value for their products. The incident was related of a spinner who demonstrated that he could sell his cotton which he had warehoused at a profit, but to manufacture this into a yarn and dispose of it on the current market would result in a financial loss to the mill.

Southern weaving and knitting mills patronizing this market seemed to be the best customers of the month just past. Other factors of the buying fraternity participated in the hand-to-mouth manner which has prevailed in the market so long that it now seems to be an entrenched, adopted policy—not only here, but throughout the nation generally and in most all commodities passing through similar channels of trade and distribution from the manufacturer to the consumer.

There was, however, no rush business, or large turnovers, reported. Along with the stronger rates came a continued disposition on the part of the buyer to hold off his future commitments, and make few purchases into the long-time future. This was felt to be a result of no long-time contracts for his own goods, since he seemed to be passing on back to this market the practice of his own customers in the line of distribution, depending upon the product and the field.

There will no doubt be a mixed situation in the yarn producing field this summer. It is felt in this market that the better part of wisdom on the part of spinners generally would be a regulation of production in preparation for the summer. In some cases, according to report, with orders taken care of the inclination is to ease off, but on the other hand there are countless evidences of firmness and strength in the position which spinners are taking.

Quotations on the Philadelphia market as of May 13 follow:

Single Skeins.

4s to 8s	25½	10s	26
12s	26½	14s	27
16s	27½	20s	29
24s	31	26s	32
30s	33½		

Single Warps.

8s	25½	10s	26
12s	26½	14s	27
16s	28	20s	29
24s	32½	30s	34½
40s	44		

Carpet and Upholstery Yarn in Skeins.

8s 3-4 hard white warp twist	25
8s and 9s 3-4 tinged tube	23
8s 3-4 hard twist waste	22

Two-Ply Skeins.

8s	25	10s	25½
12s	26	14s	26½
16s	27½	20s	28½ @29
24s	32	26s	33
30s	34½ @35	40s	44

Two-Ply Warps.

8s	26	10s	26½
12s	27	14s	27½
16s	28	20s	29
24s	32½	26s	33½
30s	35	40s	44 @45

Frame Spun Carded Yarn on Cones.

8s	25½	10s	25½ @26
12s	26½	14s	27
16s	27½	18s	28
20s	28½	22s	29
24s	30	26s	31
30s	33	40s	43
30s double carded	34	30s tying in	32

Two-Ply Combed Peeler Skeins and Warps.

8s to 16s	38 @40	20s	44
24s	45 @47	30s	49 @50
40s	54 @56	50s	58 @61
60s	68 @72	70s	80 @85
80s	90 @95		

Single Combed Peeler Yarn on Cones.

18s	41	24s	45
30s	48	36s	50
38s	52	40s	54

Mule Spun Carded Yarn on Cones.

10s	30	12s	30½
14s	31	16s	31½
18s	32	20s	33
24s	34	26s	35
30s	38	40s	47

Mule Spun Combed Peeler Yarn on Cones.

10s	40	12s	41
14s	42	16s	43
18s	44	20s	45
22s	46	26s	48
28s	49	30s	50
36s	52	38s	54
40s	58		

Page-Madden Co., Inc., Outgrow Old Quarters.

In order to secure more adequate facilities for the increasing growth of the business, the Page-Madden Company, Incorporated, has now removed to its own home at 277 Ralph Avenue, Brooklyn, N. Y., according to an announcement recently made. The removal to these new quarters places the company in a position to more efficiently serve its trade, as the manufacturing space has been increased considerably, thereby promoting efficiency and economy and allowing of much greater and more adequate service.

LEESONA NO. 60 GF UNIVERSAL CONE WINDER

THE LEESONA TARGET

"The Solution of Every Winding Problem"

Two essentials to success in any business are a *clearly defined target* and an *unwavering aim*. A third of a century ago the Universal Winding Company established for itself, as a goal or target, "the solution of every winding problem." Since then this Company has built over 2,000,000 winding spindles and marketed over fifty different kinds of winding machines. Many of the originals are still the only outstandingly successful mechanisms of their kind on the market.

This Company is at present the largest organization in the world making winding machines exclusively. Supremacy in size is the logical result of supremacy in demand. Supremacy in demand follows leadership in conception, execution, materials, and service.

THIS installation of seven No. 60 GF Leesona Universal Coners (672 spindles) in a well-known southern plant prepares cones for high speed warping from a Leesona Magazine Cone Creel. Since these machines handle work for which 1350 spooler spindles were formerly required, they have more than doubled the production per spindle formerly obtained. · PRODUCTION · DOUBLED ·

The No. 60 GF machine is also adaptable to winding cones for knitting or for shipping purposes, and its performance in these fields is just as satisfactory and just as economical as for high speed warping. Equipped with ball bearings, it requires less than 3 h. p. to operate 96 spindles at a constant yarn speed of from 450 to 600 yds. per minute.

The economies and advantages resulting from this high speed and from other features of the machine are many and far-reaching. Complete details will be furnished on request.

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA
CHICAGO, UTICA CHARLOTTE
NEW YORK MONTREAL AND HAMILTON, CANADA ATLANTA

DEPOTS *and* OFFICES *at* MANCHESTER *and* PARIS

LEESONA

UNIVERSAL WINDING

Ad. No. 6—Printed in U.S.A.

COLO

Handkerchiefs
by courtesy of
ACHESON HARDEN CO.
New York City

Bath Mat
by courtesy of
DRIAD MILLS
Philadelphia

THE MASTER SALESMAN

A few years ago about the only function of the handkerchief was that for which it was originally intended. It was generally white (in fashionable circles) and was kept out of sight until needed.

Then *Color* was introduced, and since that time handkerchiefs have successfully competed with neckties and hosiery for attention and admiration.

Whereas in the old days handkerchiefs were tucked away in boxes on retailers' shelves, today whole windows are given over to this useful and decorative clothing accessory, and sales have increased in proportion.

As to bath mats, here's what Driad Mills say:

". . . can fairly state that colored bath mats and colored towels greatly outsell the plain white ones, and that colors are a big factor in the sales. In fact, today, people seem to want more color than ever before. We have been able to give them this through the very fine work of the Franklin Process Company."

The last sentence, by the way, was unsolicited, but it shows clearly what users think of Franklin Process Dyeing and Service.

A Franklin Package of Dyed Yarn.
It will deliver freely by rotation or over end.

We dye and deliver yarn in the wound Franklin Package form (or deliveries can be made in other wound forms if desired). The Franklin Package will rotate in a creel like a spool of gray yarn or deliver over end like any parallel tube. This means the elimination of skeins, chain warps, and the attendant waste, and extra machinery and labor necessary in handling them. Many mills report savings of 5 cents per pound, or more, in winding costs.

Penetration of the colors is excellent due to the pressure dyeing method, and the strength of the yarn is unimpaired as the yarn does not change in twist.

Deliveries are consistently good. We carry some yarns in stock all wound, ready for dyeing; under these conditions, if necessity requires, we can often make shipment in two or three days after receipt of order.

Are you interested in making more sales and profits through the use of COLOR?

. . .

We would appreciate the opportunity to study your problem.

Write us today.

FRANKLIN PROCESS COMPANY
Largest Job Dyers of Yarn in America
also Yarn Spinners, Manufacturers Glazed Yarns, Dyeing Machines
PLANTS
PHILADELPHIA PROVIDENCE DENTON, ENG.
New York Office, 66 Leonard St.
SOUTHERN FRANKLIN PROCESS CO., Greenville, S. C.
CENTRAL FRANKLIN PROCESS CO., Chattanooga, Tenn.

FRANKLIN PROCESS

Commission Dyeing of Yarn in the Wound Form

Ad. No. 227. Printed in U. S. A.

The Knit Goods Market

After much hammering and backpulling by an element among distributors, the knit goods primary markets have made a good showing in the matter of aggregate volume of business. May opened groggy on announcement of the Berkshire Knitting Mills of slightly lower prices for its several numbers for, presumably, the last half of the year, but as manufacturers and jobbers recovered from the jolt of a downward revision on somewhat higher raw silk cost, and arrived at the conclusion the inevitable must be accepted, more congeniality prevailed.

Little praise for the Berkshire was heard in the trade, but that mattered not to the big Reading corporation operating not far from 10 per cent of all the full-fashioned hosiery equipment in the United States, according to apparently trustworthy statistics. The company on several occasions in the years following the world war caused much ado by doing the unexpected, particularly when, after the smash in raw silk nearly seven years ago, it extended to jobbers a substantial rebate on hosiery on order, saving numbers of distributors from what otherwise would have been losses amounting to many thousands of dollars. This business stroke was put in effect without any sounding of trumpets or flourish in the way of explanation. And no defense was offered for the recent incident. Nor has any been offered by rivals.

At first blush some leading manufacturers expressed themselves as believing the Berkshire reductions meant a fight. At last accounts no battle cry had been sounded, and business with the mills seems to be running along quite smoothly, although jobbers necessarily have been waiting, as they have been for years, for lower prices. The trade has become accustomed to that and has adapted itself to selling in retail quantities to corporations that are styled wholesalers and resent the application of the term jobber to them. Many of them cannot be accused of being jobbers, as they no longer function as such, and, as some one has said, in a jocose vein, "few jobbers can rightfully claim credit for being wholesalers." But they are buying hosiery in some fashion, and selling it, for there is being maintained a strong stage of production, with, apparently, no increase in stocks of finished goods anywhere.

To the looker-on it appeared that the Berkshire, except for strictly personal reasons, might with propriety have made no cut in prices. Back in April, buyers shopping around the New York primary markets expressed themselves as having looked for slight advances over January, and stated that to their surprise they found quotations lower. So, when the Berkshire announcement came out on May 2nd there was elation among most buyers that they had deferred, and no rush to contract at prices higher than those of the Reading concern. Since then there has been no general contracting on a large scale, so far as is known.

Some interests suspect that after the Berkshire has sold a goodly part of its production for the last six months of 1927 it will restore the previous scale of prices. This is one of many guesses. It may develop as the market gains strength that the action of the big company was a blessing in disguise. Soon after its new prices became effective a southern manufacturer advanced his prices to the Berkshire level, realizing that he had been quoting unnecessarily low. This was officially announced to a commission house handing his product.

Seamless hosiery interests were as much upset by the commotion in full-fashioned as were most manufacturers in the latter division. It was reasoned that distributors would insist that as a full-fashioned mill was regarded as having probably set a pace for reductions the seamless mills would have to supply some sort of an explanation for not making downward revisions. It seems to have been overlooked that these mills had anticipated an emergency and priced their goods down, while setting standards higher, and there has been a steadily improving market for the best silk stocking that can be made on circular machines. In March there was an indicated increase of 17 per cent in production comparing with February, but a decrease of 13 per cent from March of last year. It was during recent months that seamless goods received their best lift in a long time.

A mill in central Pennsylvania is and for some months has been operating with three eight-hour shifts of operatives six days a week and is adding 25 seamless machines. The company manufactures women's pure thread silk and silk-and-rayon, the latter intended to be sold for 89 cents a pair in retail stores, and the thread silk at one dollar. The product is sold to jobbers. A Philadelphia mill making similar lines, but selling to retailers since late last year, is operating day and night and is having hosiery made for its trade by a mill on commission. Until the last mentioned concern began distributing direct to retailers the plant was idle for a time.

The two mills referred to are representative establishments in their class, but their merchandising policies may differ from that of others not so fortunately situated as to shipments and which may not have adjusted their affairs to present marketing conditions, which, generally speaking, have not kept pace with modernization in manufacturing.

Taking the case of one of the better known New York commission houses selling, principally, hosiery made in southern mills, an executive states that sales in the first four months of this year ran far ahead of the aggregate for the corresponding period of 1926. This establishment handles both full fashioned and seamless lines from mills in the South, and is keeping at least one of its mills oversold. The concern has gone along with every development in the manufacture and marketing of hosiery except as to novelties, to which it has been giving little attention. For some years the company carried no fancy hose for men and children and is not pushing them even now. Operating along conservative lines, the company deemed it expedient to stick to staples, and finds no cause for complaint of market conditions.

If there is overproduction of women's full-fashioned silk hosiery, existence of such a state of affairs has not been proved to manufacturers of 42 gauge and finer and is doubted by projectors of new mills, of which there is quite a number—practically all small concerns. There is a demand for spot delivery fine gauge hose that cannot be met. If this continues, mills will have little complaint to make as to their year's volume. But there is much dissatisfaction with the refusal of many jobbers to contract

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

JAMES BUILDING
CHATTANOOGA, TENN.

521 COURT STREET
READING, PA.

122 E. 7th STREET
LOS ANGELES, CALIF.

MAIN OFFICE
BANKERS TRUST BLDG.
PHILADELPHIA

MILLS
CHESTER, PA.

323 SO. FRANKLIN ST.,
CHICAGO, ILL.

JOHNSTON BLDG.
CHARLOTTE, N. C.

WESTAWAY BUILDING
HAMILTON, CANADA

Inherent Yarn Qualities

Certain qualities inherent in Standard Mercerized Yarn make it pre-eminently the yarn for progressive textile mills.

Lustre, strength, uniformity and evenness are features which meet the requirements of the textile industry exactly.

By adopting Standard Mercerized Yarn you are paving the way for the most profitable operation of your plant.

STANDARD-COOSA-THATCHER CO.
CHATTANOOGA, TENN.

Sales Offices:
Lafayette Bldg., Philadelphia

Canadian Representative:
Wm. B. Stewart & Sons, Ltd.,
Toronto, Montreal

SPINNERS MERCERIZERS GASSERS BLEACHERS

STANDARD
MERCERIZED YARNS

for future, although some in Class A are known to have placed substantial orders for deliveries months hence.

Leading Pennsylvania mills are at a capacity stage of operation, a few operating overtime. One that is doing so is the Apex, Philadelphia. The Apex Hosiery Co., by the way, are reducing to scrap their remaining 39 gauge machines, supplanting them with 42 and 45 gauge. When this dismantling has been completed the company will have scrapped approximately 100 machines of 39 gauge in five years. What this amounts to in the way of equipment stands out boldly when it is taken into consideration that many mills with not more than eight to twelve machines are being operated profitably for their owners. Another Philadelphia corporation recently disposed of machines of 36 and 33 gauge.

The scrapping of the coarser gauge equipment gives recognition of the unconquerable drift to finer fabric and is an element in the delay of the full-fashioned stocking of merit to be sold retail at a dollar a pair, the goal of some manufacturers, but a prospect that necessarily is not viewed with complaisance by seamless interests.

The dollar full-fashioned stocking of some sort is on the way; in fact is here already as an item of retailers' special sales. This was instanced in the May special sales of several retailers—one in Philadelphia and one in Reading. Each sold, in a large way, chiffons of silk to four-inch welt, and shoppers are reported having taken advantage of the temporarily low prices. Sales of this character will hasten the coming of the full-fashioned at a dollar regularly, and shoppers will wait for them. It is obvious they could not now be profitable to the merchants but for a plentitude of sheer hosiery, in the production of which there is to be little letdown, judging from the number of fine gauge machines being installed, in both the North and South.

Present installation is adapted to both sheer and medium service weight, it is pointed out, and some important distributors anticipate a more general use of seven and eight thread. In fact, one nationally known distributing house is specifying eight thread and no seven, contending that a medium service weight is coming to be more generally preferred, except as to evening wear.

Not for some time, probably, will there be excess production of full-fashioned hose so far as relates to manufacturers keeping their plants abreast of progress in the matter of better fabric and fabric dictated by fashion. But there is going to be rough sledding for those placing dependence on obsolete equipment and reliance on the public to accept its output on the mere matter of price.

A Philadelphia manufacturer of seamless hose who but recently entered the full-fashioned field is having amazing success with a stocking of silk in twist with rayon. It is, necessarily, in the class described as service weight, conforms to the highest standards of full-fashioned construction and has the appearance of all-silk no less than if it carried no rayon content. For the present it is off sale, the mill having sold production for some months ahead, which is referred to in the trade as showing that distributors will buy ahead, to be assured of deliveries, so long as there is practical assurance of no great plentitude. Sold through jobbers, this stocking must fetch $1.25 a pair in retail shops.

There is reported improving call for all-rayon to narrow welt hose, but at prices not attractive to northern manufacturers. Coarse rayon is still more a subject for attack on price, and appears to be in lessened use. Comparing with March 1926, the corresponding month of this year shows an indicated decline of 125 per cent, in contrast with a decline of 1½ per cent in women's cotton hose, including mercerized.

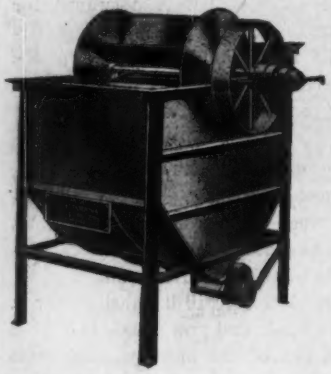
To the surprise of many manufacturers and distributors, there is well sustained demand for what is improperly described as black bottom when only black heel is meant. Fear is gaining ground, however, that the season's successful novelty will wane in popularity after summer, when, it is believed, black heel on white leg will be much in favor. Then probably a return to black and gun metal, and what will follow is beyond the ken of the most boastful forecaster. Detrimental to the combination is the fact it has been made commonplace since coming into the dollar a pair class from seamless machines. William F. Taubel, Inc., has enough confidence in it, however, to knit black pointed heel hose on spring needle machines, but this is a different proposition, the combination ordinarily embracing the square heel somewhat narrowed and offset.

The really big question mark in relation to hosiery style appears after men's fancy half hose, one of the more speculative items in stockings for the masses. So often have primary market factors predicted the fall of men's novelty socks from the high place they have held in the trade that few are willing to commit themselves as to their lifetime, since the machine builders have demonstrated there is no limitation to the patterns and color combinations that can be produced as readily as a plain stocking can be knitted. The common belief is that so long as mills continue to turn out new designs and the obsolete can be absorbed without any greater sacrifices than have been made for their clearance, novelty half hose will command no less patronage than at present, and this probably would be a more accurate guess than one in favor of plain colors. But manufacturers, to get volume production, may have to keep the retail price down to a half dollar a pair.

There is a profitable but restricted market for dollar fancy socks of silk, but, according to reports from mills and dealers, there is no big place for goods for an in-between price, and it is noted that at least two of the better known large concerns specializing in half hose for the higher price brackets found it expedient recently to curtail output.

There appears no letdown in demand for certain mill lines of half dollar fancies, and several manufacturers are known to have sold their production up to the end of July. There are others, however, who admit they are in need of spot business. The explanation for the uneveness of the situation as to demand can be ascribed to an excess output of patterns that do not now or never did appeal. This may be illustrated in the fact one of the leading chain stories is selling fancy socks easily ranking as firsts for 20 cents a pair. They are of patterns of admittedly recent attractive design, but overproduced.

Every innovation in stripes and colors is, say manufacturers, a gamble, to begin with, and speculation does not end there, for there is the appearance of still other innovations to be reckoned with. However, novelties have been the life of the half hosiery market, and that plain color silk socks will come back slowly in a big way, seems a pretty safe guess, unless the sports craze vanish sooner than at this stage seems likely. A Pennsylvania manufacturer who recently introduced half hose in stripes of six colors, in a

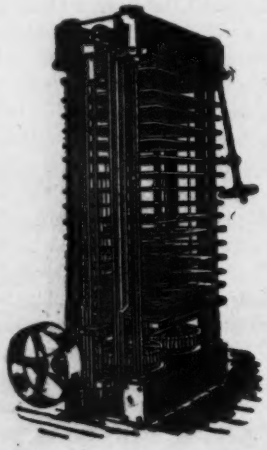


Hosiery Dyeing Machine

All **monel metal** inside of tank, including steam coil and drain pipe. This type machine gives rapid circulation insuring even colors, and is easily cleaned. Built in 5 lb. to 250 lb. capacity. Belt, chain or motor drive.
Prices quoted on application.

Special tanks and linings of monel, lead and copper built to specifications.

CHATTANOOGA BRAZING & WELDING COMPANY
Established 1909
1309 Chestnut Street Chattanooga, Tenn.
Machinists ***Welders*** ***Lead Burners***



RELIANCE
Hot Plate Screw Press
FOR
Hosiery and Underwear
Write for Catalog and Prices
Reliance Machine Works
FRANKFORD, PHILA.

S.L. BIGGLE MANAGER. JOHNSTON BLDG. CHARLOTTE N.C.

ACME
SALES COMPANY
CARDED-COMBED-MERCERIZED
COTTON YARNS
ALL COUNTS AND DESCRIPTIONS FOR THE KNITTING-WEAVING-CONVERTING TRADE
CONTROLLED REPRESENTING DIXIE MERCERIZING CO. LUSTRE MANUFACTURE
IN NORTH CAROLINA

SEWING operations of all kinds are done Better, Cheaper, and Faster on Union Specials.

Send for descriptive bulletins and samples of the operations you are interested in.

Union Special Machine Co.,
400 North Franklin St., Chicago, Ill.

CONTINENTAL DRI TRANSFERS
The standard in quality—Fairest in price—No Dry transfer could do more.
CONTINENTAL TRADEMARK CO.
KNOXVILLE, TENN. 151 EAST 126th ST.—NEW YORK, N. Y. OSAKA, JAPAN

Weimar Bros.
Phone Connections
Works: 2046-48 Amber Street
PHILADELPHIA, PA.

MANUFACTURERS OF
Cotton Mercerized Tapes, Spool Tapes, Bindings and Narrow Fabrics for Underwear and other Trades.

half dozen varieties, in May increased production by around 1000 dozen pairs over preceding months, and by July, the management say, the output will be 6000 dozens a month or more than double that of January.

There is a wide open market for children's fancy sports length hose. Some few mills have been in arrears with deliveries and for this reason had to accept cancellations. But there was no difficulty in disposing of the goods, and jobbers very much in need were glad, in instances, to accept for spot hosiery in the packing of competitors. There is, particularly, activity in juvenile seven-eighth hose to sell for a half dollar a pair, and in boys golf hose for the same bracket. One establishment is having volume business for fall in sports length made of cotton with a light admixture of wool and an all cotton full length, both for the half dollar price bracket.

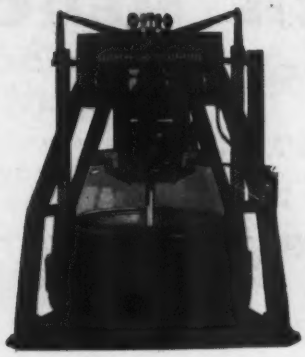
A southern manufacturer who was encountered on a recent visit to the northern markets is operating his mill day and night and shipping out production. He is especially well provided with business in misses' 300 needle full length flat hose, in both combed and mercerized, and is running strong also on a line of patterns. All of the several numbers are designed for the retail 25 cent and half dollar class. Asked as to conditions among mills generally in the South, this manufacturer said he believed nearly all were being operated full time and some on overtime schedules. The hosiery manufacturer in the South that cannot report "busy", he thought, could find the explanation within his own organization. The pressure on mills during and even before the beginning of spring was due to late detailing by jobbers.

According to some manufacturers in the North, in New England more particularly, there has been more advance buying of men's, women's and children's wool hose than to May last year. The comparatively few manufacturers of women's wool mix hosiery in plain colors report free buying, especially of lines to go over the counter for a dollar. It appears business in women's pattern wool-and-rayon hose is draggy in comparison with the situation as to solid colors, which is quite the reverse of what might be expected.

Infants, socks for May deliveries were scarce, among some few mills, and none was in serious need of spot business. But, while jobbers were calling for socks for May, mills were pressing for business for June. Numbers of jobbers had tarried too long with their details, while big chains of stores and catalog houses were well supplied. In one instance a jobber complained that socks which it was expected would be delivered in May had not arrived, yet a chain store had the line on sale, and, what was the more exasperating, was getting 39 cents a pair, while the jobber's customers anticipated selling them for 50 cents.

A road salesman returning from the middle west after a disappointing tour among jobbers illustrates by his sales how closely to needs distributors are buying. In one city he sold to every jobber, making a 100 per cent score. His total sales of the socks for the trip were 500 dozens, ordered by 15 jobbers. When booking one order for a single number he had to accept, for the sake of harmony, cancellation of a part of a previous order, the cancellation amounting to 20 dozens. The buyer was afraid he had gone wrong as to one color. And this was a big establishment, and the price of the socks a little over $1.50 a dozen.

The few manufacturers who were willing to express an opinion as to opening their lines for the 1928 season



As Accurate as a Swiss Watch

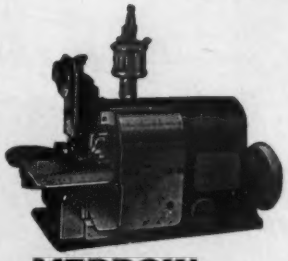
IF ten minutes extracting time gives you best results for the operations which follow—then you want to be sure that the extractor runs exactly 10 minutes, and not 8 or 12 minutes. You can be sure with the Humatic Hydro Extractor for the timing mechanism is as accurate as a Swiss watch. The Humatic automatically stops at the conclusion of the correct and predetermined extracting period. Write for details.

The American Laundry Machinery Co.
Specialty Dept. C. CINCINNATI, OHIO

THE CANADIAN LAUNDRY MACHINERY COMPANY, Ltd.
47-93 Sterling Road,
Toronto 3, Ont., Canada

MERROWING

Established 1838



HIGH SPEED TRIMMING AND OVERSEAMING, OVEREDGING AND SHELL STITCH MACHINES

For use on all kinds of knitted and woven fabrics.

MERROW
Reg. Trade Mark

Ask for details of our NEW STYLE 60ABB for simultaneously trimming and joining in a FLAT-BUTTED SEAM, the ends of cotton, woolen or silk piece goods for subsequent processes such as washing, bleaching, calendering, dyeing and printing, effecting substantial saving in labor and cloth.

Send us samples of your own fabrics to be seamed.

Quality and Quantity Production at Low Operating Cost

THE MERROW MACHINE COMPANY
16 Laurel St., Hartford, Conn., U. S. A.

DIXIE MERCERIZING COMPANY

Mercerized AIR DRIED YARNS

Chattanooga Tennessee

Philadelphia, Pa., Cameron & Pflugst, 308 Chestnut St.,
New York, N. Y., The Manley-Johnson Corp.,
260-266 W. Broadway
Reading, Pa., Cameron & Pflugst, Amer. Casualty Bldg.
Chicago, Ill., Fred W. Frank, 166 W. Jackson Blvd.
Charlotte, N. C., Acme Sales Co., 905 Johnston Bldg.

Los Angeles, Calif., J. V. Calhoun, P.O. Box 1566, Sta. C.
Leicester, England, J. Carmichael & Co., Stamford St.
(Sole Representatives for Great Britain)
Argentina and Uruguay, Chile, Bolivia and Peru, Les Fabricantes Unidos, Inc., 150 Nassau St., New York, N. Y.,
Sole Representatives
Toronto, Canada, Slater & Company, 53 Yonge St.

AMERICAN YARN & PROCESSING CO.

MOUNT HOLLY, N. C.

SPINNERS AND MERCERIZERS

HIGH GRADE COMBED AND CARDED YARNS—16s to 80s

Our Mercerized Yarns Are the Product of Our Own Mills

General Office, Mt. Holly, N. C.

Representatives

R. D. McDONALD,
James Bldg.,
Chattanooga, Tenn.

HAROLD W. O'LEARY CO.,
52 Chauncey St.,
Boston, Mass.

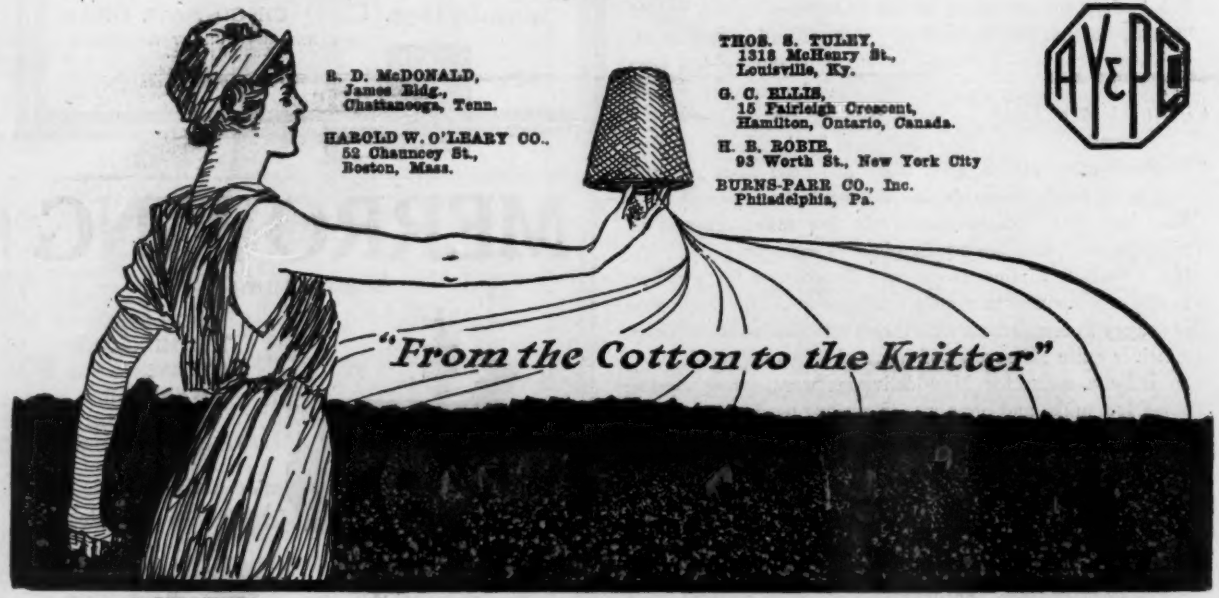
THOS. S. TULEY,
1318 McHenry St.,
Louisville, Ky.

G. C. ELLIS,
15 Fairleigh Crescent,
Hamilton, Ontario, Canada.

H. B. ROBIE,
93 Worth St., New York City

BURNS-PARR CO., Inc.
Philadelphia, Pa.

A Y & P C



COPYRIGHTED

Single Yarns
Mercerized
Bleached and Dyed
on Cones
Specialization in Fugitive
Shades for Plaiting and Splicing

THE ELMORE COMPANY
MERCERIZED
YARNS
Spindale
N.C.

The ELMORE Co.
Spindale, N. C.
Licensed Manufacturers Tinted Yarn
Selling Agents JOHNSTON MILLS COMPANY
Charlotte, New York, Philadelphia, Reading, Chattanooga, Chicago

thought none of them would be as much in a hurry to come on the market as was the case last year. Buyers always are eager to give samples an early look-over, and then generally shop around for a comparison of prices. "We do not want anyone to say opening to us for a while," said a representative of a well known mill, "and hope no manufacturer will let a buyer see a sample or get a quotation before August. Experience in the last two years proves that July is too early."

Underwear.

Retailers can be properly charged with responsibility for sluggishness in the underwear markets, according to representative jobbers, and they are the chief beneficiaries of manufacturers' lower prices. Last year retailers were paying $7.50 for a well known mill brand of light weight union suits, selling them at a dollar per suit. This year they are getting the suits for $7.12½ a dozen, but the consumer continues to pay a dollar. Yet the retailers, say jobbers, are buying extra conservatively, leaving it to mills and jobbers to carry stocks. Few were last month provided for a heated week's selling, and it was the belief that most department stores would have not enough to carry them through more than two weeks of high temperatures, and would have to depend upon jobbers for spot delivery goods. They are carrying stock so light that, it is stated in some quarters, mills could not supply them in the event of a rush.

Bal briggan underwear appears to be in better call for the current season, and several mills, in May, were sold up tight to the end of June, declining orders almost daily. The Blood Knitting Co., Amsterdam, N. Y., is said to have experienced no decline in demand after advancing shirts and drawers 12½ cents a dozen from $3.00. A jobber who probably had bought heavily prior to the advance was selling the suits for $3.25 several weeks after it had gone into effect, causing some commotion among competitors.

While demand for bals has continued strong generally, jobbers have been able to buy most lines out of stock. Some distributors say bals are moving better, relatively, than ribs, on the ground the latter are a shade heavier. Be this as it may, nainsooks certainly are losing no ground, and branded lines are selling in greater volume than last year. There is reported considerable price cutting in cheaper lines, skimped in the making, for a price, or made from 64-60 cloth, and the more representative houses do not encourage their distribution.

As jobbers are guided in their purchases by the tardiness of retailers, they are, many of them, buying in single case lots but buying often. The effect of this is to give the market the appearance of more briskness than really exists. Neverthless, the aggregate sales of manufacturers are, in the main, satisfactory, and the season probably will close on a larger volume than did that of last year.

Women's light weight cotton underwear has been comparatively active for six to eight weeks. Mills are kept fairly well supplied with immediate delivery orders, jobbers usually being able to buy out of manufacturers' stocks. It is the opinion of manufacturers and some jobbers that this year's consumption of women's cottons will show no decline from that of 1926, and it is encouraging to mills that a fair amount of business for medium weight garments has been placed, so that before the light weight season ends manufacturers should be engaged with orders for fall and winter. Mills selling to catalog houses and chain stores

Quartz Quality Silicate of Soda in the Cotton Mill

Yes sir, Star Brand Silicate in the bleach may save you 20% in your bleaching bill. A trial will show you how to get snowy whiteness for less money. Other uses of Quartz Quality Silicates that save you dollars and cents:

Prevention of rust stains from kiers
Boiling off
Printing textiles
Rust prevention in hot and cold water lines
Dustproofing concrete floors

Philadelphia Quartz Co.
121-129 S. Third St.
Philadelphia

Zehlendorf Viscose RAYON YARNS

Spot and Future Deliveries of Finest Qualities in

Regular Yarns and Special Twists

Immediate Service is afforded through our southern sales representatives

JOHN L. BARTRAM CO.
American Exchange Bank Bldg.
Greensboro, North Carolina

NEUBURGER & CO., Inc.
Sole Agents and Distributors for the U. S. A.
104 Fifth Ave. *Established 1866* New York

have a steady flow of business, jobbers operating in a more jerky way than the big retail establishments.

It appears that only a few of the manufacturers of men's heavy weight cotton ribs are boastful of the advance business taken to May. It is the opinion among a considerable part of the distributing trade that most of the southern mills have more detailed orders than those in the North making lines of commonly accepted standards. Two manufacturers in Ohio whose brands are nationally advertised are understood to have taken contracts for more cases than to the end of May last year. But in a general way, the market for heavy weights continued sluggish during the greater part of May. Advances in carded yarns following the rather startling increases in prices for combed doubtless will have the effect of improving conditions for manufacturers in June.

Noting the caution with which retailers were operating in summer weights, jobbers have not been urging their customers to make commitments for their fall needs. In fact, some distributors did not begin offering winter weights until about the end of May, several stating their road salesmen would not offer them until the first week in June. Once jobbers begin to hear from their road men, they probably will make a start with their late buying. All things considered, it would appear that a stronger situation is shaping for mills, and that those manufacturers who for a time feared they would have to curtail will feel warranted in going ahead with production on an approximately normal scale. Certainly the outlook is for more satisfactory conditions than have prevailed.

Sweaters.

With the exception of cricket coats and golf sweaters, sold with hose to match, sweater lines are in slow movement, taking into consideration the fact jobbers commitments have been light and that five months of the year are in the past. Jobbers report little action by the retail trade, and some express the fear the 1927 distribution of sweaters will fall below that of last year, when a six months business was crowded into three. The bulk of the business taken to date is from distributors who are the more remote from centers of manufacture. New York and Philadelphia jobbers selling the nearby trade report only light retailer interest, while beyond the Mississippi jobbers appear to have fared better, as indicated by the orders placed with eastern and Central West manufacturers. It is, therefore, too early to speak with any degree of accuracy as to what the near future has in store for mills. A forecast made eight or ten weeks hence probably would sound more encouraging than any submitted at this time.

Bathing suits have had quite a lift in the last few weeks, some eastern mills being compelled to operate plants overtime. Improvement in this division will, if history repeat itself, give some impetus to other knitted outerwear lines, and with indications of a broadening interest in shaker knit coats there is a fair degree of assurance that sweater manufacturers may eventually have about all the business they can take care of. But the waiting for the eventual is not wholesome for worsted yarns, which appear to be more nearly stagnant than in several years, with prices unsettled and unprofitable.

D. J. QUILLEN has become overseer of spinning at the Valley Falls Mills, Spartanburg, S. C. Several years ago he was overseer of spinning at the Whitney Mfg. Co., Whitney, S. C.

Dressy Novelties for Ladies Wear.

In spite of the fact that reports continue to be received of the demand for black full-fashioned chiffon and ingrained silk and rayon hosiery, particularly for late summer and early fall, many domestic mills announce an unusually large number of colors, and at the close, all sorts of job lots, replacement stocks and future contracts point to a big white summer and fall season. White is often preferred to all colors and worn with both dark colors and street shades.

"Knee" clocks are among the new lines continued into the fall by one firm who numbers among the wearers of their product, the Queen of Italy, the concern having presented her with more than a dozen pairs a few months ago in all sorts of colors and types. Their feature for the season is the "knee clox" and at the moment they appear to be most active, although their plain chiffons are also moving, but at the close, one representative of the company said a good interest was shown for fancies. Many of the designs are featured in self colors although there are some that show the combinations which have been finding favor for the past few weeks.

Metal yarns have been used this season extensively, and judging from the number and type of imports of the same sort they will be more active for fall and spring of 1928 than they have this season. Some manufacturers declare they are booked ahead for the next six months on fancies of this sort and and believe there is a big future in novelties of the dressy type, since little attention has been given to them for a number of years. In case the self-colored fancies are wanted, one manufacturer said he believed that darker colors would come back to favor, although demand shows no indication of any such movement at the present time.

Bright colored flowers are embroidered on the silk hosiery in shades of red and pink as well as yellow and white and roses appear to be favorites at the moment, although the old fashioned garden and field flowers are among those wanted for future delivery.

The flying neck scarfs are being embroidered in matching designs in some of the new holiday sets which are to be featured in the fall collections. This is especially true of these colors which can be used for evening, with white one of the most promising at the present time. Soft pinkish yellows are also favored and believed to be among the more acceptable.

Some printed ends are also shown in jacquards, which are to be featured at the same time, and made the usual 72 inches long and 20 to 36 wide. Colors are sponsored by some of the largest handlers. The 56 inch square fringed heavily is also to be included in the holiday line in white, black, pastels and some darker shades.

Women are beginning to turn their attention to the white knitted silk and rayon underwear in many districts and while hand embroidery is shown to a certain extent, laces are favored and promise to become even more active as the demand develops. Fall business in these lines is not so active at the moment, although it is showing a little more life than it did a few weeks ago, and factors believe that business will move along about as usual.

"Gain all the knowledge you can and then use it for the highest purpose."